OCT 12 1934

The OIL AND GAS JOURNAL

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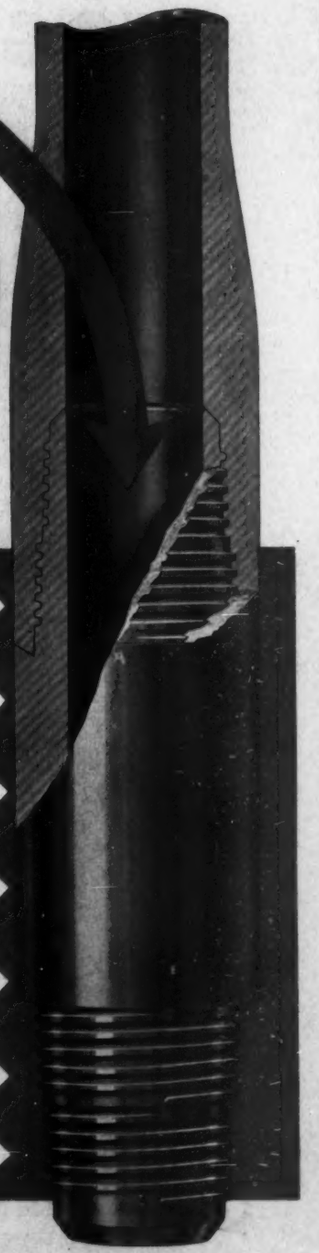

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3½ 13.3 lbs. 2.764 I.D.	1⅞	2.761	2-7/16	4.666	2¾	5.940
4½ 16.6 lbs. 3.826 I.D.	2-13/16	6.213	3	7.069	3-13/16	11.416
5-9/16 22.2 lbs. 4.859 I.D.	3-13/16	11.416	4⅛	13.364	4-13/16	18.190
6⅝ 25.2 lbs. 5.965 I.D.	5	19.635	4-15/16	19.147	5-15/16	27.688

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E. O. Chapa,
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THE OIL AND GAS JOURNAL

Volume 33
Number 21

October 11, 1934

SUBSCRIPTION RATES: Domestic, 1 year, $6; 6 months, $3. Canadian and foreign, 1 year, $7; 6 months, $3.50. All subscriptions payable in advance. When extra copies of special issues are available they are reserved for subscribers' needs and may be bought by subscribers at 50 cents each

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OIL MAN'S CALENDAR

October

12-13—American Institute of Mining Engineers, Petroleum Division, fall meeting, Tulsa, Mayo Hotel.

16—Kansas-Oklahoma Division, Mid-Continent Oil and Gas Association, annual membership meeting. Date subject to change.

16-17—Chicago, National Association of Lubricating Grease Manufacturers, annual meeting, Stevens Hotel.

16-18—Big Four State Jobbers Association Convention, Kansas City, Mo.

18—Arkansas Oil Dealers Association, Hotel Marion, Little Rock, Ark.

24-25—Indiana Independent Petroleum Association, Inc., First Convention, Hotel Severin, Indianapolis, Ind.

29—American Gas Association Convention and Exhibition, Atlantic City, N. J.

November

Los Angeles, Calif., American Association of Petroleum Geologists, Pacific Section.

12-15—Dallas, Tex., annual meeting, A.P.I.

15-17—American Institute of Chemical Engineers, Pittsburgh, Pa.

National Road Oil Congress, Fourth Annual Meeting, Tulsa.

22-23—Fourth annual National Road Oil Congress, Tulsa.

December

3-8—National Exposition of Power and Mechanical Engineering, Grand Central Palace, New York.

7-8—Fifth annual meeting, Independent Petroleum Association of America, Forth Worth, Tex.

January

5-12—New York Automobile Show, Grand Central Palace, New York.

7—New York, Society of Automotive Engineers, annual dinner.

8-10—Milwaukee, Wis., Annual Convention and Equipment Show of Wisconsin Petroleum Association, Plankinton Hotel.

April

8-13—Oil Equipment and Engineering Exposition, Houston, Tex.

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IT'S FROM OILWELL

Meetings in Washington Discussing Oil Policies and Prices Holding Interest of the Industry

By JAMES McINTYRE

WASHINGTON is again the center of interest in the oil industry. Important meetings which began Monday will continue all or most of the week. It is expected that an executive assistant to Oil Administrator Ickes will be appointed, whose duties will be to carry on much of the actual work which devolves on the Administrator, who is fairly bogged down with duties growing out of his position as Secretary of the Interior. The question of crude oil prices occupies a high place among the subjects being considered.

The action of the United States Supreme Court in granting a petition for a writ of certiorari in the Panama and Amazon oil cases puts the cases up for argument as to the constitutionality and legality of the orders which the defendant companies named are alleged to have violated.

The most important news out of Oklahoma in recent days was the purchase by the Carter Oil Co. of 520 acres of leases in the Fitts area in southern Pontotoc County for a sum supposed to be up in the millions. The sellers were Messrs. Delaney, King and Miller, who pioneered the Fitts field. They have reaped a rich harvest from their faith in the area and their investment of time and money in gathering the property and helping to explore it. The sale goes to disprove the claim that the "little fellow" has no chance in the oil business in this day of deep wells and necessarily large investment.

There appears to be no change in the East Texas situation. "Hot" oil running continues unabated. The hands of the Railroad Commission are tied until the recently passed law covering refinery operations becomes effective late in December. A gasoline price war started by the hot oil contingent has brought further distress in East Texas, but efforts are being made to end the fight.

In the Permian basin fields of West Texas the high light of the week was the discovery of a high-gravity oil showing in a well drilling in Upton County. Other fields in Texas failed to report anything of unusual interest. Oklahoma and Kansas field news was also of a routine character, while the only interesting information out of the Rocky Mountain area was the extension of the Eunice Pool in Lea County, New Mexico.

Dundee sand oil in two Central Michigan wildcats points to new pool possibilities in Midland and Isabella Counties.

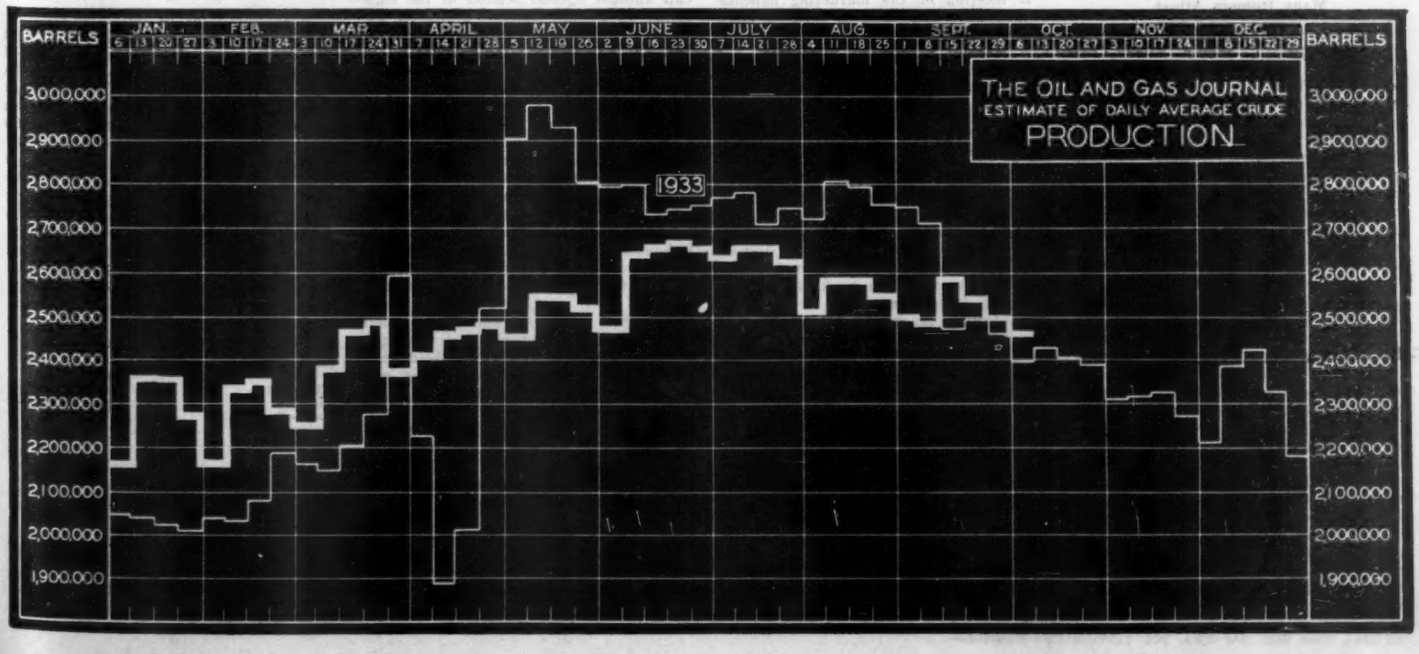
The daily oil production of Louisiana last week rose above the 100,000 bbl. mark, the first time it has reached that figure in over 20 years. Increasing production in the Louisiana Coastal fields is responsible for the recent steady increase in the State's oil output. Louisiana's largest average daily production for one year was in 1922, when it averaged 97,550 bbls. per day.

Crude Oil Production in the United States

Estimated daily average production for the week ending October 6 and a comparison with previous week and the Federal allowable, follow:

	Oct. 6	Federal allowable in October	Sept. 29
Oklahoma—			
Oklahoma City	126,050	.....	139,270
Seminole-St. Louis	72,025	.....	79,690
Remainder of State	222,700	.....	232,245
Total Oklahoma	420,775	457,400	451,205
East Texas—			
Lathrop	198,124	.....	197,325
Kilgore	179,173	.....	178,475
Joiner	152,400	.....	151,276
Total East Texas	529,697	.....	527,075
West Texas	147,624	.....	157,222
North Central Texas	86,023	.....	86,900
Texas Panhandle	61,795	.....	61,625
East Central Texas	51,176	.....	52,175
Gulf Coast—Texas	178,025	.....	178,225
Southwest Texas	56,227	.....	57,724
Total State of Texas	1,110,567	956,100	1,121,047
Kansas	120,200	123,700	122,160
North Louisiana	23,755	.....	23,900
Gulf Coast—Louisiana	78,850	.....	75,425
Total Louisiana	102,605	88,300	99,325
Arkansas	30,640	30,200	31,245
Eastern fields (except Michigan)	103,500	97,300	103,000
Michigan	31,728	29,000	30,038
Rocky Mountain area	97,890	91,500	99,680
California—			
Santa Fe Springs	36,750	.....	36,750
Long Beach	58,250	.....	57,500
Mountain View	9,600	.....	9,600
Elwood	8,750	.....	8,100
Kettleman Hills	54,700	.....	54,500
Remainder of State	281,950	.....	278,550
Total California	450,000	452,300	445,000
Total United States	2,467,905	2,325,800	2,502,700

Decrease 34,795 Bbls. Daily.



Ickes to Get Executive Assistant; Cut in Crude Price Not Favored; Amazon Case in Supreme Court

By HUGH D. MALLON
Washington Bureau, The Oil and Gas Journal

WASHINGTON, D. C., Oct. 9.—Matters of especial interest to the entire petroleum industry are being considered in Washington this week. The importance of meetings being held and scheduled may be gauged from the fact 21 of the 22 industry members of the Planning and Coordination Committee are in session here. Harold L. Ickes, oil administrator, will hold a conference with the Planning and Coordination Committee on Thursday at which time it is expected every effort will be made to formulate a workable program for administration of the industry's affairs under the code. This program, it is felt here, contemplates the elimination of many of the orders and interpretations which have cluttered up the code and have involved the industry in a labyrinth.

Appointment of an executive assistant to the oil administrator is expected to be announced this week, possibly at the meeting Thursday. Rumor has it the appointee will be Ralph Horween, a lawyer of Chicago, who has been connected with the Division of Investigations in District 3 and who is said to have been quite successful in his work under the code. Secretary Ickes does not feel, it is reported, that he can legally delegate the administrative powers granted him by the President but that an executive assistant could devote his whole time to administration of the code. Such an official probably would be given charge of the activities of both the Petroleum Administrative Board and the Division of Investigations.

Many Rumors Afloat

Such action on the part of the oil administrator probably will allay many rumors which have been afloat here for some time. These were to the effect efforts would be made this week to have the administrator materially reduce the powers and functions of the Petroleum Administrative Board, it being claimed serious delays have been incurred in getting matters passed upon by this board and that many rulings and interpretations regarded as originating in the board have placed an undue burden upon the industry and complicated the administration of the oil business. Another was to the effect many members of the Planning and Coordination Committee felt they must resign unless a definite, workable program were formulated and the committee given more authority to act for the industry and not be handicapped by the Petroleum Administrative Board.

Sentiment here seems to be definitely in favor of maintaining crude oil prices at the present levels. There has been much discussion of possible reductions in prices and numerous unofficial meetings have been held here on the subject and still are being held. Small refiners contend they cannot exist much longer if crude prices are maintained at a dollar and gasoline prices remain at present distress levels. The proper relationship between crude and refined oil prices has not existed for more than a year, to the detriment of best interests of refiners. Crude oil prices are not too high, in fact, conditions in the producing branch of the industry warrant far better prices, but gasoline prices are entirely too low.

The U. S. Supreme Court has granted the petitions for writ of certiorari filed in the Amazon and Panama cases. The cases will be reviewed by the court and oral arguments as to the constitutionality and legality of orders and regulations of the oil administration heard. This argument will probably be heard and a decision rendered within the next 45 days.

Report on Pipe Lines

The transportation subcommittee of the Planning and Coordination Committee is scheduled to hold a meeting on Friday, at which time it will put the finishing touches on its report on pipe line operations. This pipe line report is to be submitted to Administrator Ickes with recommendations from the committee as to what action should be taken by the administrator, or the President, in regard to this branch of the industry.

It is anticipated that this report will thoroughly cover all phases of pipe line transportation and practices, and will completely refute the allegations which are being made by some individuals that pipe lines should be placed in the same category as railroads and regulated in the same way. The report maintains that pipe lines are plant facilities, used primarily for the purpose of adequately supplying the refinery owning the line with crude. As such they are in a class by themselves and should be so considered.

Marketing Subcommittee

A meeting of the marketing subcommittee, which has been in progress since last Wednesday, will continue this week. The marketing section of the code has been under fire for some time, and it is believed the committee, at this meeting, is taking steps to make the marketing provisions more workable. No indications have been forthcoming from the committee as to how the desired results will be obtained. However, it has been recommended by some members of the industry that the regulations relating to marketing be weeded out, those sections which are the most unwieldy or impossible of enforcement being deleted.

A new start, with a workable and enforceable instrument, will be of great value to the marketing branch, it has been stated. Such a procedure, at this time, it is believed by some, would remove some of the doubts which the marketers have at present as to what they may do in the course of business without violating the code. The marketing provisions, at the present time, involve some of the most controversial subjects encountered in the oil industry.

Refinery Subcommittee

The regularly scheduled meeting of the refinery subcommittee begins today. It will consider only the routine business which comes before it. Control of refinery operations, which at first was thought to be almost impossible of accomplishment, is working out much better than any other attempt of the oil administration. Recommendations of the administrator and of the national co-ordinator are being complied with by practically all operators. The amount of overproduction of gasoline from legal crude is almost negligible.

Perhaps one reason for the showing being made in the refining branch is the fact that these provisions of the code are being administered more or less by the industry. The Petroleum Administrative Board sets the national gasoline allowable, while the national co-ordinator allocates, from this figure to the various refining districts of the country. District allocators, or allocating agencies, then subdivide the district quota into allocations to each individual refinery in the district.

There has not been any agitation for any change in the refinery sections of the code, and if any changes in the code are considered by the Planning and Coordination Committee at this meeting there is little likelihood of altering the instrument with respect to this branch.

Refinery Board of Review

The refinery board of review today takes up the consideration of 26 appeals from the rulings of the district allocators in regard to gasoline production by individual refiners. There is no connection between this meeting of the board and the special call for the Planning and Co-ordination Committee meeting, as the board had scheduled its meeting before the committee decided upon its call.

East Texas Enforcement

Petroleum administration officials who left Washington for East Texas last week with instructions to stop the running of "hot" oil are still in Texas. Officials in Washington, who are in constant touch with developments are very much heartened at the looks of things in the East Texas Field. Charles Fahy, vice chairmen of the Petroleum Administrative Board, and Louis Glavis, chief of the Division of Investigations of the Department of the Interior, have been collecting evidence and preparing for court action.

This week will probably see several suits for injunction filed in the civil branch of the Federal District Court to restrain operators from running and transporting oil produced in excess of allowables. Confidence is expressed both by officials of the oil administration and members of the industry that "hot" oil can be controlled with the exercise of powers which have been granted to the administrator by the code and by the National Industrial Recovery Act.

The action which is expected to be taken by the oil administration will probably be directed at the shipment in interstate commerce of illegally produced oil.

(Continued on Page 52)

East Texas Waiting for Action as "Hot" Oil Reaches 120,000 Barrels Daily

By L. E. BREDBERG

FORT WORTH, Tex., Oct. 8.—The oil industry in Texas is in such a critical situation it now appears as if the governor, taking cognizance of the almost entire breakdown of all rules and regulations pertaining to the production, refining, transporting and marketing of the State's greatest revenue commodity, would call another special session of the legislature to discuss possible remedies. The Railroad Commission is practically helpless, and will be until the recently passed bill pertaining to the transportation of products refined from illegal oil goes into effect on Christmas Day. Until that time refiners can "make hay while the sun shines" and refine and transport as much illegally produced and manufactured products as they can market.

A meeting is to be held in Dallas October 9 by the Texas gasoline price stabilization committee and officials of the Independent Refiners Association of East Texas to discuss possible methods for settling the price war that has brought gasoline down to 10, 12 and 14 cents, some small stations even selling their third grade product below a dime a gallon. Many meetings have been held heretofore to deal with the same subject, and outside of providing momentary relief, there has been nothing definite and lasting accomplished for stabilizing the market, especially in the Dallas and Fort Worth trade areas where much of the East Texas third grade product is dumped by trucks and tank cars.

Two of the largest refiners in East Texas posted a price of 6½ cents on wholesale gasoline on October 3, stating they would "whip the teapot refinery into line," and this may have more effect than many meetings, for the smallest refiners know that the two operators forcing the issue will no doubt stick to their plan, take the smaller plant operators' markets and thereby hit them more than could be accomplished by any other method. Selling gasoline at 6½ cents leaves but 1½ cents per gallon for the product after the tax is paid.

Runs and Shipments Increase

Meanwhile runs to refineries continue to increase, and shipments of refined products from the field increase, as of course, does overproduction. This week's runs to refineries in the field averaged 110,720 bbls. per day. Overproduction was estimated at from 120,000 to 130,000 bbls. per day. Tank car shipments increased to 1,468 per day, such shipments greatly increasing every week. During the week 10,551,460 gallons of gasoline were moved out by rail, an increase of 70,350 gallons over the previous week's shipments, tank car movements, however, showing no such gain, the conclusion being drawn that larger tank cars are being used in moving refined products now.

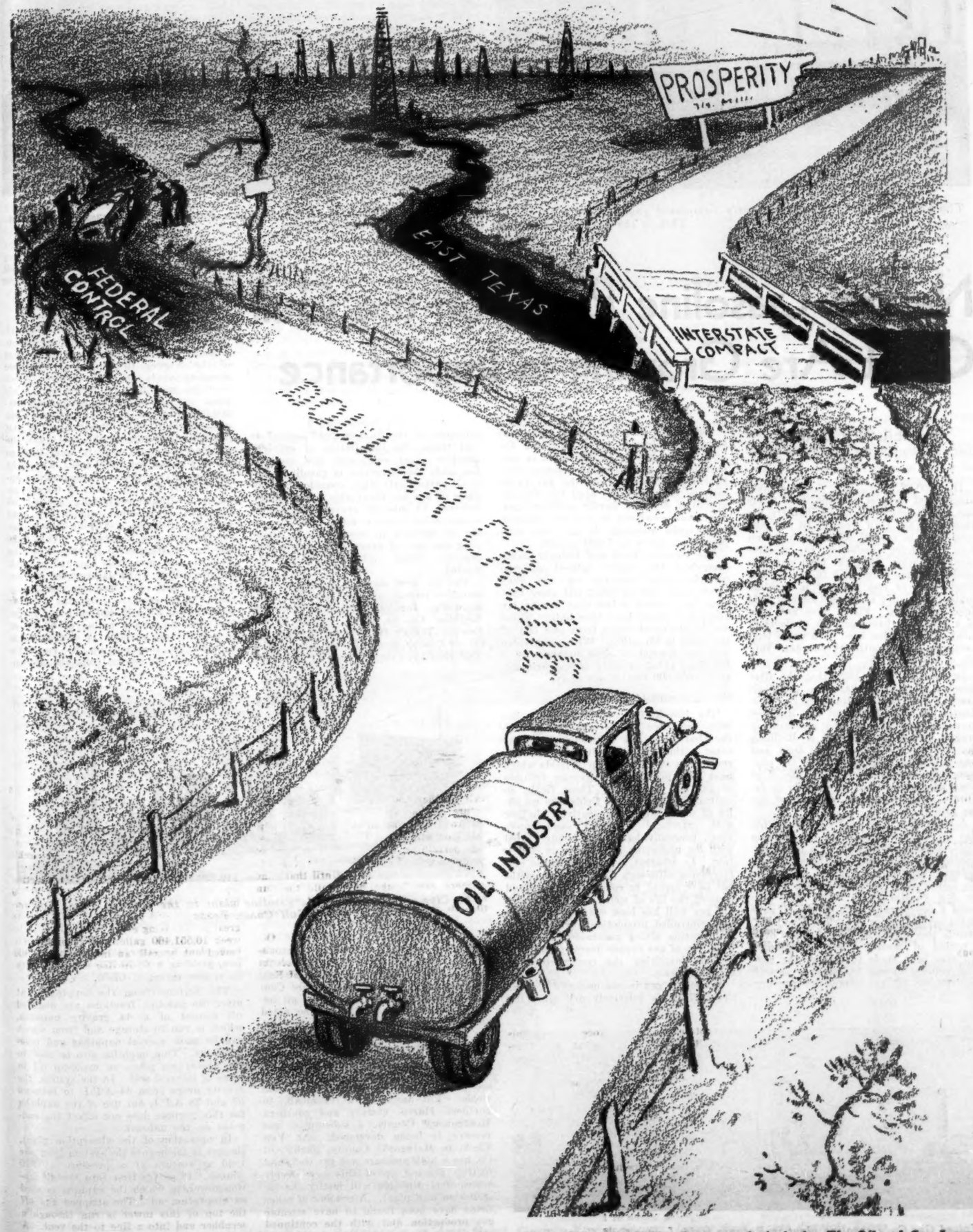
Shipments of refined products for the week follow:

Product—	No. of cars	Gallons
Gasoline	1,293	10,551,470
Fuel oil	758	7,032,520
Residuum	155	1,324,310
Kerosene	98	794,970
Topped crude	443	3,975,000
Distillate	247	2,016,260
Casinghead gasoline	139	1,232,275
Gas oil	151	1,243,880
Crude tops	6	51,270

Interstate shipments totaled 1,440 cars while intrastate movements were 1,898 cars for the week. Whether the Federal Government's new setup in the field, with Louis Glavis, chief of the division of in-

(Continued on Page 42)

Which?



—Drawn exclusively for The Oil and Gas Journal

The Shell Petroleum Corp.'s recently completed gasoline plant in the Iowa field on the Calcasieu-Jefferson Davis Parish line in Coastal Louisiana. This is the only gasoline plant ever built in southern Louisiana

Natural Gasoline Plants on the Gulf Coast Are Growing in Importance

By NEIL WILLIAMS
Gulf Coast Bureau, The Oil and Gas Journal

HOUSTON, Tex., Oct. 6.—The manufacture of natural gasoline until lately has been a phase of the oil industry unknown on the Gulf Coast. In the past conditions in coastal oil fields have not been considered conducive to gasoline plant operation. For the most part gas production has been small in volume and short lived, or else too low in gasoline content to justify extraction beyond field drips and traps. Fields have not been of a type, nor have methods of development or production been such as to lend assurance of a continued adequate supply of raw material.

It was not until 1930 that the first gasoline plant was built on the Gulf Coast. That was at Raccoon Bend, in Austin County. The plant was installed in connection with a sand repressuring project which Humble Oil & Refining Co. put into operation at that field, and was of secondary consideration, the purpose being mainly to strip the gas of as much gasoline content as possible to facilitate the injection or recycling of dry gas into the sand.

A short time later in 1931, the United Gas Co. set up a plant in the Refugio Field, using equipment from a plant dismantled at Waskom, Northeast Texas. Refugio, located in what is known as the Lower Gulf Coast, had been one of the few coastal fields which had produced a considerable volume of gas, supplying several major gas trunk pipe lines. Despite this supply of gas developed over a period of several years no attempt had ever been made to recover the gasoline content except in traps to satisfy requirements of gas companies for dry gas.

Before the Raccoon Bend plant was completed, Humble Oil & Refining Co. installed equipment at Sugarland in connection with a repressuring system there to extract gasoline from the gas to be injected back into the sand but the gas proved so dry that hardly sufficient gasoline was recovered to wet the accumulator tanks although the gas was compressed as much as 1,200 pounds.

The Raccoon Bend and Refugio plants comprised the entire natural gasoline manufacturing industry on the Gulf Coast until late in 1933, but since that time, in a period of less than a year, six additional plants have been built. These are in scattered fields from one end of the coast to the other. With these there now are a total of eight plants with a combined rated capacity of approximately 250,000,000 feet of gas daily.

Field Conditions

The installation of these plants has been prompted by several things. In the first place, the development on the coast within the last several years has resulted in the proving up of fields which have been productive of greater volumes of gas and pressures. These fields, in contrast to the former fields, the majority of which were comparatively shallow with extremely lenticular sand conditions, generally have been deeply seated with the producing horizons more consistent. In addition to this, proration and increasing efficiency in production methods have served to conserve the gas and prolong the life of wells. While the output per well has been curtailed, uniform and controlled production have provided stabilization giving assurance of a continuation of gas supply over a fairly long period, justifying the construction of gasoline plants.

While the gas in the majority of Gulf Coast fields is relatively dry after the stripping of the fluid in field separators and traps, the installation of efficient gasoline plant equipment and methods has made the extraction of gasoline practical, particularly when considerable volumes of gas are obtainable. The plants, however, fit into the general program of conservation which is being carried on in the oil industry in most areas by stripping the gas of every drop possible of gasoline which otherwise might be wasted.

The six new plants which have been installed consist of the following: Clymore Co., Inc., Refugio, Tex.; Nueces Refining Co. at Agua Dulce, Nueces County, Texas; Humble Oil & Refining Co. at Conroe, Montgomery County; Midland Gasoline Corp., Conroe; Paramount Natural Gasoline Co., Pledger, Brazoria County, Texas, and Shell Petroleum Corp., Iowa, Jefferson Davis Parish, Louisiana. The latter is the only Central Louisiana plant, the others all being in coastal Texas. It can be noted that the Clymore Co., Inc., and the Nueces Refining Co., are controlled by the same interests, headed by Garland Clymore of Corpus Christi, Tex.

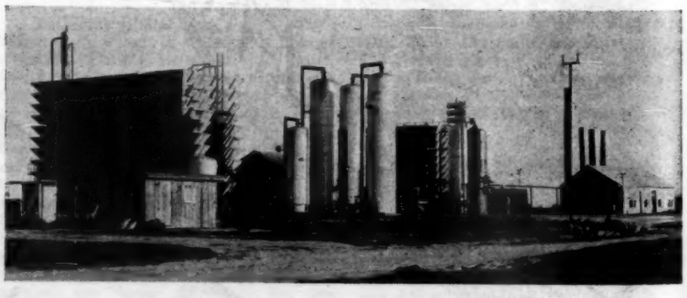
It is probable that plants will be built sooner or later in several other coastal fields. For instance, at Tomball, in northern Harris County and southern Montgomery County, a substantial gas reserve is being developed. At Van Vleck, in Matagorda County, Skelly Oil Co. has a high pressure wet gas well, and further proving up of this new deeply seated field probably will justify the installation of a plant. A number of other fields have been found to have sizeable gas production and with the continued exploration for and development of additional deeply seated structures and salt domes no doubt many others will be brought to light.

Clymore Plant

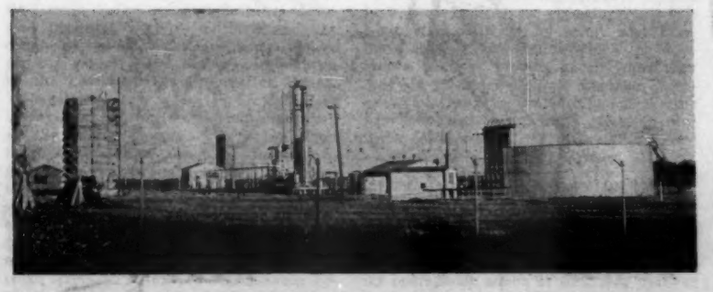
The plants constructed represent various types and methods of operation. Among the high pressure plants is that of the Nueces Refining Co. (Clymore Gasoline Co.), at Agua Dulce, which recently was put in operation. This plant is handling approximately 40,000,000 feet of gas daily from eight wells of the Clymore Production Co. Of particular interest is the fact that the gas has a content of only from 0.15 to .25 of a gallon per 1,000 feet. The eight wells supplying this gas also produce approximately 450 bbls. daily of 60 gravity oil, a distillate containing around 95 per cent of gasoline and 3 per cent naphtha, with the remaining 2 per cent representing loss in topping. This light gravity oil, trapped in separators at the wells, is run separately through a small topping plant, which is operated in conjunction with the gasoline absorption plant. The gasoline from the topping plant makes a 64-66 400 endpoint motor fuel with an octane rating of 63-65, or if a high test gasoline is desired, it is possible in the hook-up to run this stream and the stream from the absorption plant together through the stabilizer, yielding a 68-70 375 endpoint with an octane rating of 67-70.

The bottoms from the topping plant after the gasoline fractions are distilled off consist of a 44 gravity naphtha, which is run to storage and from which can be made special naphthas and tractor fuels. This naphtha also is used in the absorption plant as make-up oil in place of mineral seal. In the system, the gravity drops from 44 A.P.I. to between 37 and 38 A.P.I. but use of the naphtha for this purpose does not affect the endpoint on the natural.

In operation of the absorption plant, the gas is taken into the system from the field separators at a pressure of 370 pounds. It passes first into the absorption tower, in which the naphtha is used as absorption oil. The stripped gas off the top of this tower is run through a scrubber and into a line to the vent. A relief valve on this line controls and



The Clymore Gasoline Co.'s gasoline plant in the Refugio field, Lower Gulf Coast, Texas



United Gas Co.'s gasoline plant in Refugio field, Lower Gulf Coast, Texas

maintains the constant desired back pressure on the absorption tower.

The fat oil from the absorption tower passes into an accumulator tower, in which the lighter fractions vaporize and pass off the top into the reabsorber. The remainder of the fat oil then is run through heat exchangers to the still. In the operation from the absorber to the still, the pressure is dropped from 370 pounds to 40 pounds, which is held by a relief valve on the vent line off the reabsorber. The latter valve, which holds this 40 pounds back pressure on the reabsorber, and in turn on the accumulator tower and remainder of the system, also eliminated the need of a recompressor, which is an important factor in economy and simplicity.

The fat oil entering the still is preheated in the exchangers by the hot lean oil bottoms from the still. A temperature of 340 degrees is maintained in the still, which strips the fat off of all the gasoline fractors which pass off the top into the dephlegmator. A temperature of 210 degrees is maintained at the top of the latter. A small stream of gasoline is injected as reflux. The vapors then pass through the condensers, and as liquid to the accumulator tank and then to the stabilizer. The raw natural, which is around 35 pounds vapor pressure, in the stabilization operation is reduced in vapor pressure to market requirements of 14, 16, 18, 20, 22 or 26 pounds.

The topping plant for the light gravity oil from the field consists of a small steam heated still and dephlegmator. This still for motor fuel, is operated at a temperature of 350° with 150 pounds steam pressure. The oil enters the still after first passing through a steam preheater.

The entire plant represents the latest design to provide the greatest economy and efficiency in operation. This is typified in the water cooling and condensing equipment which is combined and centralized. Water for the plant is supplied from a well which is located inside the water cooling tower. The water is jetted by gas to the top of the tower, from where it sprays down through the tower. At the bottom of the tower, laid out horizontally, are the various condensing and water cooling coils, one for vapors off the topping plant, another for the vapors from the absorption plant, a third for the hot lean oil from the still, and the fourth for the water cooling.

A closed water cooling system, providing for the recycling of all water used by the plant through coils in the bottom of the cooling tower, is made necessary because the water obtained in that area is undesirable for plant use without treatment.

Fuel costs and water requirements for the boilers also are minimized by the conservation of all steam in a closed steam system, all steam from the pumps, preheaters and stills being collected and condensed for reuse. High pressure steam is run to a high pressure accumulator located in the boiler house, while low pressure steam is cycled through a hot well to the boilers.

Control and operation of the plant is entirely automatic.

Clymore Co.'s plant, located in the Refugio Field, and which was built in 1933, is similar in operation although it is not nearly as modern in design and equipment as the one at Agua Dulce. In that plant, recompressors, instead of natural pressures, are used in boosting the charge from the reabsorber back into the system. That plant also operates at considerably less pressure, taking the gas from the wells around 75 pounds. The gas at Refugio is somewhat richer than that at Agua Dulce with a recovery of around three-quarters of a gallon per 1,000 feet. The plant now is turning out around 20,000 gallons daily. A small topping plant also is operated in conjunction with this installation although entirely separately. It is handling around 200 bbls. daily of light gravity oil trapped from the separators.

United Gas Plant

United Gas Co. also has a gasoline plant at Refugio, this being one of the two older plants on the Gulf Coast, being built in 1930. It has a capacity of 50,000,000 feet daily and now is handling approximately 47,000,000 feet daily with a recovery of 20,000 gallons of gasoline. The content of the gas runs between .425 and .50 of a gallon per 1,000 feet. This also is a pressure plant, taking the gas from the well separators around 350 pounds. The residue from the absorption unit is boosted into the United Gas System's trunk lines.

Paramount Plant

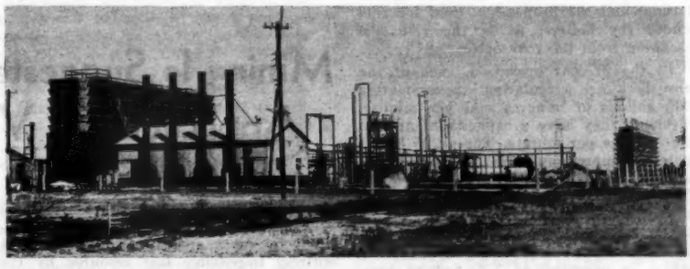
Another high pressure plant is that operated by the Paramount Natural Gasoline Co. at Pledger, Brazoria County. This plant was completed the past summer. Gas is supplied from three high pressure wet gas wells drilled by Danciger Oil & Refining Co., which controls the field. The plant takes the gas from the wells around 750 pounds. The operation in many respects is similar to that of the Nueces Refining Co. at Agua Dulce except that the light gravity oil production of the wells is not trapped off and run through a separate topping plant. Instead, the entire stream is handled directly by the absorption plant. Capacity of this is around 50,000,000 feet of gas daily. The Pledger wells, which are producing from a horizon at 6,900 feet, have working pressures around 2,500 pounds, being among the highest pressure wells on the coast.

Separator elevated on a 30-foot tower in Conroe field. The Humble Oil & Refining Co. has elevated about a third of all its separators at Conroe to permit drainage of the fluid from the separators by gravity to storage so that a minimum of pressure will be required on the separators. This results in more of the lighter ends of the crude, which otherwise might evaporate in storage, passing off with the gas to be recovered as gasoline in the company's gasoline plant

Humble Plant

At Conroe, Humble Oil & Refining Co. is operating a low pressure system. This plant, built this year, which is running around 10,000,000 feet of gas daily from the company's leases, is taking the gas at atmospheric pressure. Compressors, of which there are seven, boost the gas through the absorption unit at a pressure around 35 pounds. By this method the company is getting a higher recovery than if it took the gas under well pressure. The yield at this time is around 2 gallons per 1,000 feet, but in the operation the plant is recovering all the butane and turning out a 30-33 vapor pressure product. If the vapor pressure were reduced further, the recovery no doubt would be reduced to around 1½ gallons per 1,000 feet.

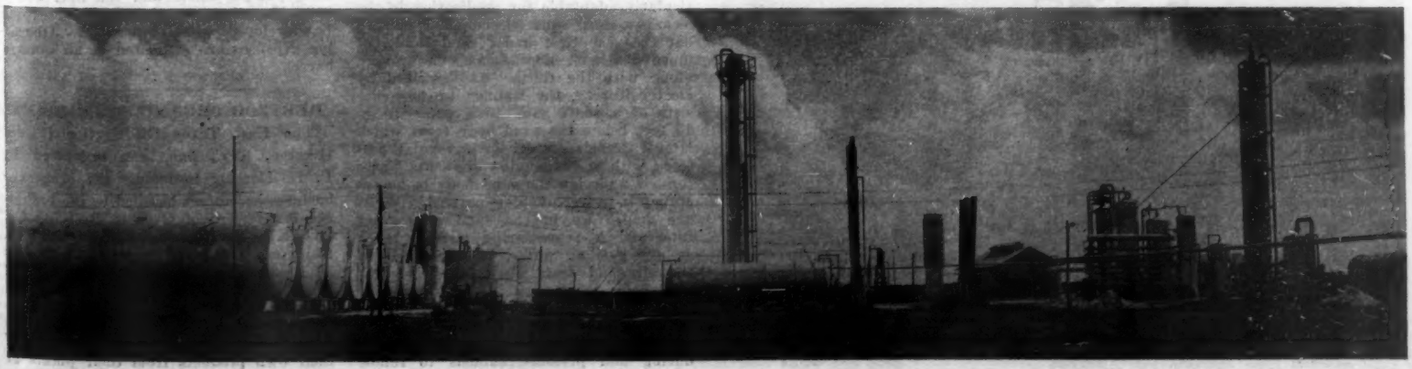
To facilitate the taking of gas at as low a pressure as possible and to increase the recovery, Humble Oil & Refining Co. has been elevating its separators. About a third of the separators now are erected on 30-foot steel towers. This practice permits the complete drainage of fluid from the separators by gravity into storage so that a minimum of gas pressure will be required on the separators. By lowering this separator pressure the lighter fractions of the crude, which otherwise would be run to storage as liquid and then evaporate, are allowed to pass off with the gas to the gasoline plant to be recovered as gasoline.



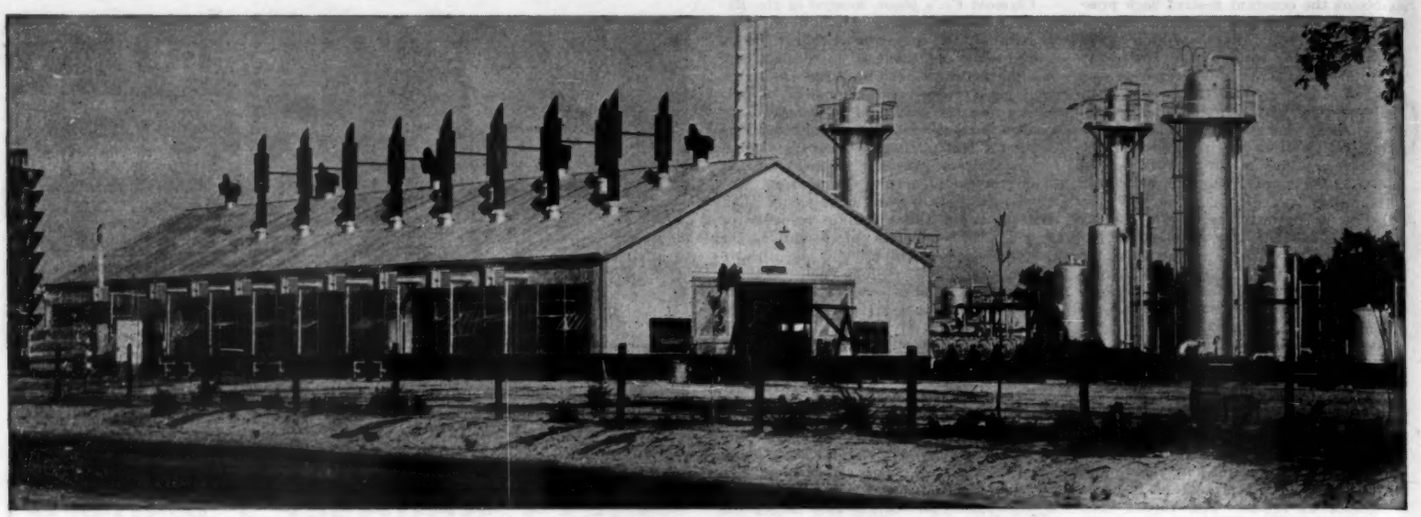
The gasoline plant of the Humble Oil & Refining Co. in the Raccoon Bend field, Austin County, Texas Gulf Coast

Midland Gasoline

The Midland Gasoline Corp.'s plant at Conroe, however, is being operated under well pressures, the gas being taken from the gathering system at the scrubber around 60 pounds, which is reduced slightly in the operation, leaving sufficient pressure to return the dry gas to the originating leases or to gas lines. This plant, completed late in 1933, is handling around 25,000,000 feet of gas daily and under the above pressure is getting a recovery of a little over a half gallon per 1,000 feet. The gas is contracted from the various operators in the field, the company having no production of its own. A gathering system of approximately 200 miles of line ranging in size from 2-inch up to 12-inch serves all parts of the field. The lines are laid in duplicate, one system for gathering the gas and the other to return to the leases what stripped gas is



The gasoline plant of the Nueces Refining Co. in Agua Dulce Field in Nueces County, Lower Gulf Coast district, Texas



Natural gasoline plant of the Humble Oil & Refining Co. in the Conroe field of Texas

desired for fuel or other purposes. What is not returned to the leases is taken by the United Gas Co., or else burned.

Shell Plant at Iowa

The most recently completed plant is that of Shell Petroleum Corp. in the Iowa Field, which is located on the Jefferson Davis-Calcasieu Parish line in Louisiana. This plant, equipment for which was assembled from four or five other plants in Oklahoma and North Texas which were dismantled by the company, was put in operation August 15. It now is handling 12,000,000 feet of gas daily, 10,000,000 feet of which is taken from Shell's leases, and 2,000,000 feet from the Barnsdall Oil Co. There is an additional 4,000,000 feet of gas in the Field being produced by Magnolia Petroleum Co. which as yet has not been contracted for.

The gas from the Shell leases is received through an 8-inch line at the scrubber under pressure of 50 pounds and is run directly to the absorber. The gas from the Barnsdall wells is pulled under vacuum through a 16-inch line and then boosted by compressors to the 50-pound pressure at which the Shell gas is handled. Separate absorption towers handle the gas from the two respective companies. In the operation, the pressure is reduced from 50 to 40 pounds. The two streams are run together into the reabsorber after passing through the absorbers and continue through the system in one operation. Of the stripped gas, 2,000,000 feet daily is returned to Barnsdall, 8,000,000 feet is delivered to the United Gas Co., which has constructed a booster station on its trunk line which passes near the field, while the remainder is returned to the Shell leases for fuel.

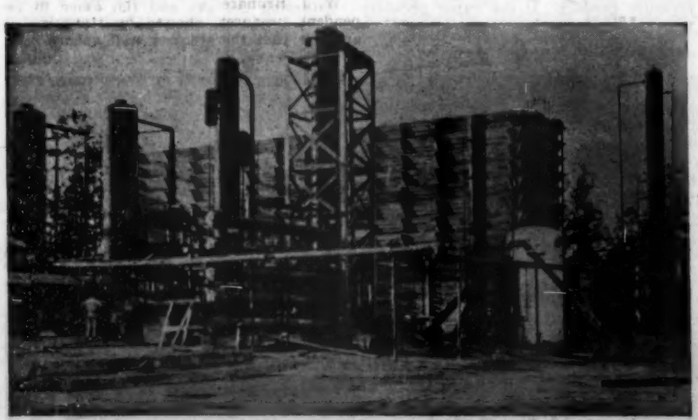
From the gas which is taken from the Shell leases under 50 pounds pressure, the plant is getting a recovery of from .7 to .8 of a gallon per 1,000 feet. The Barnsdall gas, which is pulled under vacuum, yields around 1½ gallons per 1,000 feet. All the gas is stripped to .007 of a gallon per 1,000 feet, and the B.t.u. of the gas is reduced to 1,080, which is within the maximum of 1,100 allowed by the gas company. The raw natural gasoline from the plant has a vapor pressure of around 30 pounds, which is reduced by stabilization. The rest of the butane and the propane is used for fuel under the boilers, as is the rich gas escaping from the reabsorber.

In the present operation, each of the absorbers are circulating approximately 265 gallons of mineral seal per minute, although they have a capacity of around 400 gallons per minute. Three 225 horsepower compressors, one of which is a standby, boost the Barnsdall gas to the 50 pounds pressure to correspond with the pressure at which the Shell gas is taken into the absorber. The plant has a combination still and dephlegmator, which is operated at 350 degrees temperature with 225 degrees temperature being maintained on top.

Steam for this plant is provided by five 112 horsepower boilers, three of which are in use. Electric power not only for the plant but also for all field use is generated at the plant by a 125 KVA generator driven by a 165 horsepower steam turbine. Good water is provided by 300-foot wells, the water being lifted by electrically driven pumps.

The only other plant on the coast is that of the Humble Oil & Refining Co. at Raccoon Bend. This plant, as previously mentioned, was built in 1929 and 1930, and is operated in conjunction with a repressuring project. It now is handling around 5,000,000 feet of gas daily, which is about 60 per cent of its capacity, and is recovering approximately 6,500 gallons daily, or more than 1 gallon per 1,000 feet.

Gas from the field is being pulled under 8-inch vacuum, and in the first stage of compression is boosted to 35 pounds pressure, at which a little gasoline is recovered. In another stage of compression the pressure is boosted to 150 pounds, at which pressure the gas is taken into the absorption unit. The residue gas from the absorption unit then is boosted to pressures required for injection back into the sands. Of particular interest in connection with this plant is the fact that the finished product has a vapor pressure of only 22 pounds without stabilization and it has not been necessary to install a stabilization unit.



The gasoline plant of the Midland Gasoline Corp., in the Conroe field, Montgomery County, Texas Gulf Coast

Mining Is Suggested as Adaptable for Application in Venango Third Sand

By ROBERT C. CONINE

OIL CITY, Pa., Oct. 8.—For several years considered as a "far-fetched notion" by most operators, and as a not entirely impossible last resource by the more sanguine, the proposition of mining for Pennsylvania grade crude oil is now receiving the serious attention of experts, and practical men who may pay the tunneling bills are busy with their pencils.

The best of secondary recovery methods in the Bradford-Allegheny Fields leave much of the oil in the sand, are susceptible to disappointing "kinks," and involve development costs considerably exceeding $5,000 an acre. For something less than $5,000 an acre, engineers point out, the oil can be mined, insuring a much greater recovery.

The Ranney oil mining process, developed at Jacksboro, Tex., has been suggested by Paul D. Torrey, of Torrey, Fralich and Simmons, Bradford geologists and petroleum engineers, as particularly adaptable for application in the Venango third sand. Others have pointed out that the first and second sands, at much shallower depths, may be worked along with the third. As described by Doctor Torrey, the Ranney process consists of a shaft sunk to a point 10 to 15 feet below the sand body from which lateral tunnels are driven in regular patterns with accompanying crosscuts. These tunnels underlay the sand body to be operated in a rectangular pattern. Wells are drilled up in the sand at regular intervals. A repressuring medium, such as air, gas, or water, is introduced in the oil sand from above or below the sand body.

In Appalachian district installations, Doctor Torrey says, stratification of the sand may call for alternating the producing and pressure tunnels to follow the structure contours, instead of driving four producing tunnels to surround a tract. The small number of crosscuts required in this method of application, he points out, would not be used for production or repressuring but to determine through test holes the rate of progress of the advancing pressure medium, and the content of the mixtures in the sand at any point and at any level. By adapting the pressure at each general level to the permeability of the sand, a substantially straight front on the advancing wave or bank of the oil-expelling medium may be maintained, Doctor Torrey says.

In reporting his cost calculations, Doctor Torrey received the assistance of expert mining engineers and his figures remain unquestioned. He arrives at a total development cost for a tract of 1,000 acres of $4,928,000, divided as follows: Two 1,500-foot shafts, $450,000; 217,800 feet of lateral tunnels, $2,178,000; 20,000 mine wells, $2,000,000, and compressors, pumps, hoists and the like, $300,000. He points out that 2,000 acres can be developed with two shafts. Operating expenses are estimated at 25 cents a barrel.

HERTZOG ORGANIZES COMPANY

The East Texas Oil Service Co. of Overton, Tex., has been organized by P. H. Hertzog to handle the brokerage business heretofore handled by the brokerage department of Overton Refining Co. and Kilgore Refining Co. at Overton. Daily contacts have been arranged with 20 to 25 sources of supply in the East Texas area on materials ready for shipment.

The Overton Refining Co. and Kilgore Refining Co. retain the marketing of their own products from their plants at Overton and Kilgore which products are well known to the trade.

California Nominees for Governor Announce Their Positions on Oil Industry Issue

By L. P. STOCKMAN

LOS ANGELES, Calif., Oct. 8.—The electorate of California will decide early in November which of three candidates will guide the destinies of the State for the next four years beginning early in January and the decision may be a momentous one due to the issues involved. The gubernatorial race lies between Governor Frank Merriam, Republican, and Upton Sinclair, the Democratic nominee, and it is generally conceded the vote will be so close the pendulum may swing either way. The petroleum industry of California, equipment manufacturers, and other kindred industries are vitally interested in the outcome of the election and because of the influence which future policies may exert on the petroleum industry the views of both candidates are presented herewith.

Governor Merriam, a resident of Long Beach for 25 years and rather conservative in his views, strongly insists that "the State has made and must continue to make every effort to be scrupulously fair with both producer and consumer."

Upton Sinclair, sponsor of the Epic program, in carefully guarded words, told The Oil and Gas Journal that "I regard the oil industry as largely a producing, manufacturing, refining and marketing industry and shall seek the best technical advice available in dealing with problems which have a relationship between its operation and the public good. I believe that the oil industry of California will be ready and willing to do its part to put our unemployed to productive labor and thus take them off the backs of the taxpayers and I invite the oil men in every phase of the industry to join us in ending poverty in California."

Both candidates declared themselves in favor of conservation of natural resources, Governor Merriam calling attention to the fact that President Coolidge first directed attention to the need for orderly development of petroleum resources and that the California legislature enacted the existing gas conservation law in 1929. It is significant to note that Governor Merriam recently came to the aid of the California oil industry and the national administration by instructing the sealer of weights and measures not to issue a permit for the discharge of East Texas hot gasoline into the State. This move obviously met with almost unanimous approval by both large and small refiners and marketers who have been strenuously attempting to stabilize marketing conditions on the Pacific Coast and by doing so maintain an equilibrium and thus permit employment for the maximum number of employes.

Governor Merriam, in support of this, stated that "regulatory powers are divided between state and Federal governments and each has a certain definite duty to perform during the present state of unsettled conditions. Where the objective is a common one and for the public good the State has always co-operated effectively with the Federal Government."

Sinclair's Statement

Mr. Sinclair, despite his statement to "seek the best technical advice available in dealing with problems of the oil industry and its operation and the public good" and his approval of the state democratic platform which is rather general in its policies, has written an "epic" policy that "our State has great deposits of oil and natural gas, millions of acres of timber land, great deposits of minerals, almost unlimited hydro-electric power, and a vast variety of factories and transportation units. In fact, we have practically everything needed to put our idle to work. The power to tax is a sovereign right and may be exercised in almost any way the people desire. There is nothing in either law or common sense to prevent the State levying an 'epic' tax designed to reach directly the superabundant wealth and resources of California and procure a needed portion of them for use of the unemployed. If you are a believer in rugged individualism and more concerned with the welfare of corporations than of idle men, still you cannot deny that this 'epic' tax would be fair and just. Our levy would not greatly deplete the materials, machinery or natural resources owned by corporations. It is our contention that this tax, levied directly upon big property holders, would not make the taxation of big business proportionately any greater than that borne by small taxpayers. We are pledged to put the burden on those who can carry it and the 'epic' tax will carry out our pledge."

Mr. Sinclair contends that since 40 per cent of the people of California have practically no purchasing power and that only a relatively small percentage of the remaining 60 per cent have sufficient purchasing power to be substantial consumers of gasoline and oil the "epic" plan for restoring purchasing power to 100 per cent of the population must increase consumption to a large degree.

Governor Merriam's View

Governor Merriam stated he is "fully alive to the importance of the petroleum industry and equipment manufacturers who together employ around 200,000 men, pay $25,000,000 in taxes and have an invested capital of over $1,000,000,000. It is my desire to maintain in California the degree of public confidence necessary to attract capital rather than to frighten it away with fantastic schemes. A stable prosperous oil industry is a great asset to the State, second only to agriculture."

The governor for the next four years will have a number of important posts to be filled, not the least of which is that of the Director of Natural Resources who is charged with enforcement of existing statutes relating to all natural resources. Governor Merriam does not contemplate any legislation affecting the oil industry at the present time and Mr. Sinclair is noncommital as he is of the opinion that it will be several months before a definite plan is outlined with regard to the petroleum and allied industries. The Democratic nominee is, however, committed to an income tax for salaried employes and what appears to be almost a confiscatory tax on corporations. The third candidate, Raymond Haight, is running independently but does not have sufficient support, although he is an estimable gentleman.

Administrator's Report on Crude Stocks

Stocks of domestic and foreign crude petroleum at the close of the week ended September 29 totaled 333,552,000 bbls., an increase of 577,000 bbls. over the total of 332,975,000 bbls. on hand at the end of the preceding week, Harold L. Ickes, Secretary of the Interior and administrator of the code of fair competition for the petroleum industry, announced. This increase, which followed a decrease of 439,000 bbls. during the previous week, comprised an increase of 439,000 bbls. in stocks of domestic crude oil and a gain of 138,000 bbls. in stocks of foreign crude.

According to current reports of the industry for the week ended September 29, in comparison with those for the previous week, both daily average crude production and runs to stills declined materially but imports of crude showed a substantial gain. The decrease in daily average crude runs to stills greatly exceeded the decline in production, hence, as indicated above, the trend in crude stocks was reversed. The approximate daily average balance of crude oil for the week ended September 29 was as follows (barrels): Production, 2,480,000; imports, 109,000, equals runs to stills, 2,320,000; increase in stocks, 82,000; exports, losses, etc., 187,000.

CRUDE PETROLEUM STOCKS REPORTED BY COMPANIES HOLDING 100,000 BBLS. OR MORE

Grade of crude oil—	Stocks held by reporting companies Sept. 22, 1934 (bbls.)	Sept. 29, 1934 (bbls.)	Change from Sept. 22, 1934 (bbls.)
Pennsylvania Grade	4,641,000	4,624,000	—17,000
Other Appalachian, including Ky.	1,116,000	1,174,000	+58,000
Lima-N.E. Indiana-Michigan	1,361,000	1,391,000	+30,000
Illinois-S.W. Indiana	11,503,000	11,515,000	+12,000
N. Louisiana and Arkansas	10,403,000	10,325,000	—78,000
West Texas and S.E. New Mexico	29,557,000	29,600,000	+43,000
East Texas	35,159,000	35,098,000	—61,000
Other Mid-Continent	156,732,000	156,862,000	+130,000
Gulf Coast	18,196,000	18,542,000	+346,000
Rocky Mountain	27,646,000	27,706,000	+60,000
California	33,750,000	33,696,000	—54,000
Total domestic crude	330,094,000	330,533,000	+439,000
Foreign crude	2,881,000	3,019,000	+138,000
Total crude	332,975,000	333,552,000	+577,000

Hearings on Stripper Wells, Derrick and Rig Building Wages Set at Tulsa

By HUGH D. MALLON
Washington Bureau, The Oil and Gas Journal

WASHINGTON, D. C., Oct. 8.—The hearing called by the Petroleum Labor Policy Board and the petroleum administration to consider amending or altering the code as it relates to employes on stripper wells convened in Washington on October 4. Testimony was taken showing the position which the labor union takes and the side of the operator in the Pennsylvania Grade area was heard. The hearing then adjourned, and will reconvene on October 11 in Tulsa, where operators and employes in the Mid-Continent area will be heard.

A definition of a stripper well, recommended by the Oil Field, Gas Well and Refinery Workers Union to be used in conjunction with the labor provisions of the code, would necessitate the amendment of the code. They recommend that the authority which at present is vested in the Planning and Coordination Committee to define stripper wells for the purpose of clarifying the labor provision, be rescinded and placed in the hands of the administrator. They further recommend that the definition which they submitted be accepted by Administrator Ickes.

Under their resolution each and every stripper well property must be shown to be such by submitting to the administrator proof that the operation of the property does not bring a sufficient return to enable the payment of the wages prescribed under the code.

A. F. Swanson, secretary of the Bradford, Pa., local union, stated that in his opinion, if labor on stripper wells was to be exempted from the code provisions in regard to hours and wages, all such provisions, as they relate to production should be thrown out of the code. The resolution which the union submitted would not alter the situation in any way, Mr. Swanson said, as it would result in a situation which would not possibly be policed and would be "just like all other regulations passed by the board."

W. J. Brundred of Oil City, Pa., independent producer, showed by statistical analysis that the stripper well operators in the Pennsylvania Grade area could not pay code wages and survive. At the present time they are losing money, because if they are to continue to operate they must lay aside the necessary money to replace their equpiment as it wears out. The operators are not doing this, and are able to continue, temporarily, in business, but, when the present equipment is gone they will be forced to abandon their operations.

A further postponement of the hearings on the proposed establishment of minimum wage rates for skilled workers in derrick and rig building operations and on the agreement between employers and workers in these occupations made in the East Texas, Gulf Coast, and Southwest Texas areas was announced. Originally scheduled for October 3 and later postponed until October 8, the order further postponed the hearings until October 10, and transferred the hearings from Washington to Tulsa.

Petroleum Division of A. I. M. E. to Meet in Tulsa, October 12-13

HOWARD N. EAVENSON
President, A.I.M.E.

By L. G. E. BIGNELL
Petroleum Engineering Editor

Tulsa will be the scene of the fall meeting of the Petroleum Division of the American Institute of Mining Engineers on October 12 and 13 which promises to be one of much importance and well attended. The Petroleum Division of the A.I.M.E. has long been recognized as leading in the discussion of technical problems of interest to this industry, and the program arranged for this meeting under the direction of Harry H. Power, vice chairman of the division in charge of production engineering, promises to be outstanding in its contribution to the technical literature.

Papers prepared by Dr. J. Versluys, professor at the University of Amsterdam, Netherlands, and Dr. Cecil May of the Anglo-Persian Oil Co., Ltd., London, England, will deal with important phases of recovery of oil from underground reservoirs. Doctor Versluys will discuss "Energy Relationship in Oil-Bearing Formations," and Doctor May's paper bears the title, "The Efficiencies of Flowing Wells."

For those who are still concerned about the East Texas Field the paper to be presented by Ralph J. Schilthius and William Hurst, of the engineering staff of the Humble Oil & Refining Co., Houston, Tex., entitled "Variations in Reservoir Pressure in the East Texas Field" will be interesting. In this paper the authors undertake to indicate how long wells in the East Texas Field will continue to flow by natural energy and the critical rate of flow that must be maintained if maximum recovery is to be attained.

Estimating Reserves

E. V. Foran, consulting engineer, Texon, Tex., who is doing such an outstanding piece of engineering in completing deep wells in the Big Lake Field using pressure control methods, will join with Sidney Judson and W. A. Schaeffer, Jr., in a discussion of "Estimation of Petroleum Reserves in Prorated Fields." In this paper the authors consider the conditions in salt domes, sandstone and limestone reservoirs, each engineer contributing his thoughts upon the type of field with which he is most familiar.

Banquet Friday Night

On Friday evening, October 12, there will be a banquet in the Mayo Hotel to which the oil men of this section have been invited to have the opportunity to hear the president of the A. I. M. E., Howard N. Eavenson, Pittsburgh, Pa., who is making a tour of the country with the national secretary of the Institute, A. B. Parsons. W. P. Z. German, chief counsel for the Skelly Oil Co., Tulsa, will deliver a prepared address upon "The Government and the Oil Industry."

The technical sessions start Friday morning, October 12, and continue through Friday afternoon and all day Saturday. The complete program was published in The Oil and Gas Journal September 13, page 30. Many well-known petroleum engineers and technicians will present papers, three of which are published in this issue of The Journal. These papers are "Gas Lift in Prorated Fields" by L. L. Foley, Marathon Oil Co., Tulsa; "Spacing in Water and Gas-Drive Fields," by J. O. Lewis, Dunn-Lewis, Tulsa, and "Gas Energy in Flowing Wells," by S. F. Shaw, consulting engineer, San Antonio, Tex.

Four Technical Sessions

The meeting as a whole has been divided into four technical sessions, each dealing with one particular subject and a total of 19 papers will be presented. The first day's meeting, Friday, October 12, will cover solubility of gas in oil at the morning session and during the afternoon papers discussing the energy of flowing wells and oil reservoirs will be presented.

Saturday morning, October 13, the session will be more general in nature with papers on gas lift in prorated fields, water coning, manufacture of sucker rods, estimation of reserves and spacing of wells. During the closing session on Saturday afternoon the characteristics of drilling mud will be discussed in several specially prepared papers.

All meetings will be held in the Crystal Ball room of the Mayo Hotel, the morning sessions starting at 9:30 and the afternoon meetings at 2 p. m.

Numerous field trips have been arranged for those who care to study the

(Continued on Page 51)

Preliminary Program, Fifteenth Annual Meeting of American Petroleum Institute

The fifteenth annual meeting of the American Petroleum Institute to be held in Dallas, Tex., November 12 to 15 promises to be of much importance to the oil industry because discussion of such problems as control of industrial activities, future Federal legislation affecting the petroleum industry, technical developments, marketing possibilities, and taxation will be features on the program.

Secretary of the Interior Ickes is scheduled to speak upon subjects related to Federal legislation and control. C. C. Chapman, of Portland, Ore., editor and publisher of the "Oregon Voter," and known as the father of the gasoline tax law passed in Oregon in 1919, is also to be one of the featured speakers.

The preliminary program follows:

Tuesday, November 13, 1934

10:30 A.M.

Meeting of Board of Councillors—Baker, Mezzanine Floor, Crystal Ballroom
To nominate candidates for election as members of the Board of Directors.

2:30 P.M.

General Session—Baker, Mezzanine Floor, Crystal Ballroom
Report of Board of Councillors and Election of Directors.
Presentation of Accident Prevention Certificate Awards.
Address: Axtell J. Byles, American Petroleum Institute.
Address: W. R. Boyd, Jr., American Petroleum Institute.
Address: Baird H. Markham, American Petroleum Industries Committee.
Address: C .C. Chapman, Editor "Oregon Voter." (Author of first gasoline-tax law.)

Wednesday, November 14, 1934

GROUP SESSION
9 A.M.
DIVISION OF PRODUCTION
Principals and Factors in Allocation of Production Within Prorated Pools
Baker—Mezzanine Floor, Crystal Ballroom
(Sponsored by the Central Committee on Drilling and Production Practice)

This session will be a symposium devoted to a discussion of the relationship of various principles and factors affecting allocation programs in any prorated pool. The following subjects will be discussed, speakers will be announced later.
Acreage and Formation Thickness.
Permeability, Potential and Bottom-Hole Pressure.
Volumetric Withdrawal and Application of Factors to Allocation Plans.

GROUP SESSION
10 A.M.
DIVISION OF REFINING
Lubrication Problems—Adolphus, Fifteenth Floor, White Room
Lubrication of Solid-Injection Engines, W. G. Gordon, Socony-Vacuum Oil Co., Inc.
Extreme Pressure Lubricants, H. C. Mougey, General Motors Corp.
The Structure of Liquids and the Mechanism of Viscosity, W. K. Lewis, Massachusetts Institute of Technology.
Improved Motor Oils, M. Otto, F. L. Miller, A. J. Blackwood, and G. H. B. Davis, Standard Oil Development Co.

GROUP SESSION
10 A.M.
DIVISION OF MARKETING
Marketing Session—Adolphus, Twenty-first Floor, Roof Garden
The Dealer's Place in the Picture, speaker to be announced.
Dealer Margins, Fred M. Lege, Jr., Magnolia Petroleum Co.
Sales Administration, A. A. Stambaugh, Standard Oil Co. (Ohio).

GENERAL SESSION
2:30 P.M.
General Session—Baker, Mezzanine Floor, Crystal Ballroom
Address: Hon. Harold L. Ickes, Secretary of the Interior and Oil Administrator, has been invited to speak.
Address: Amos L. Beaty, chairman, Planning and Coordination Committee.

GROUP SESSION
8 P.M.
DIVISION OF PRODUCTION
Drilling and Production Practice—Baker, Seventeenth Floor, Peacock Terrace
(Sponsored by the Central Committee on Drilling and Production Practice)
Papers on following subjects are now under consideration by the Program Committee:
Rig and Derrick Lighting.
Paper on Research Project—Source Beds of Petroleum in California, Wyoming, Oklahoma, and Texas.
Rehabilitation of Small Properties in California.
Overcoming Paraffin Troubles by Hydraulic Pumps in California.
Effect of Oil Meters at Trap Set-ups in Kettleman Hills.
Economic Factors in Handling Heavy Oils in California.
Hydraulics of Mud Fluid Travel Through Drill Pipe.
History, Development, and Application of Full-Hole Tool Joints.

GROUP SESSION
8 P.M.
DIVISIONS OF REFINING AND MARKETING, JOINT SESSION
Fuel Problems—Adolphus, Fifteenth Floor, White Room
The Evaluation of the Ignition Characteristics of Diesel-Engine Fuel Oils, C. C. Moore, Jr., and G. R. Kaye, Union Oil Co. of California.
Economic Status of the Automobile Diesel Engine in Road Transportation, J. Geschelin, Automotive Industries.
Fuel for Rail Cars, D. P. Barnard, IV, Standard Oil Co. (Indiana).
Report of Co-operative Fuel Research Committee on the 1934 Detonation Road Tests, presented by C. B. Veal, Society of Automotive Engineers, secretary of the Co-operative Fuel Research Committee.

(Continued on Page 51)

"ALL IRON" LIQUID LEVEL GAGE

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Ejector, Syphon or Jet Pump

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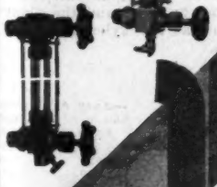
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The Penberthy "All Iron" Liquid Level Gage is automatic in operation. Ball check valves in both the upper and lower body close immediately and positively to prevent the loss of liquid when the glass is broken; the hand operated stop valves may then be closed with safety and a new glass inserted. The drain cock is integral with the lower gage body and is provided with thread for drain connection.

Penberthy Liquid Level Gages are carried in stock by supply houses everywhere.

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Mid-Continent Runs to Remain High in October

By GEORGE WEBER

October crude runs to stills in the Mid-Continent will practically duplicate those of the past two months, according to estimates of refiners in that area. The estimated figure for this month is 500,755 bbls. daily, a gain of 925 bbls. over the September total. Although the total of a half million barrels daily is not an excessively high figure as compared with past Octobers, the failure to recede from this year's August peak of seasonal activity threatens the maintenance of present refined oil prices. Furthermore, the unseasonal trend is general. It is supported in most of the refining districts and by a majority of refiners within the districts themselves.

Oklahoma and West Central Texas show October daily decreases of 7,960 and 2,430 bbls. respectively. The remaining districts show gains of from 355 to 5,910 bbls. daily.

Beginning last May the estimated crude runs in the Mid-Continent have lagged the estimates of the same period in 1933. This month's figure, however, exceeds that of October, 1933, by approximately 5,000 bbls. per day.

In North Central Texas the monthly increase was due mainly to gains of 500 bbls. by the Panhandle Refining Co., and 200 bbls by the Waggoner Refining Co. Kansas showed several changes in October schedules. The Kanotex Refining Co. cut runs 1,500 bbls. daily. The Phillips Petroleum Co. anticipates adding 1,500 bbls. to the daily average this month and increases of 500 bbls. by the Skelly Oil Co., and 1,000 bbls. by the White Eagle Oil Co., are further responsible for the Kansas gain.

The Lion Oil Refining Co. and the MacMillan Petroleum Products Co. estimate increases of 500 and 300 bbls. respectively over September, and the Ouachita Valley Refining Co. has increased operations.

Oklahoma Operations

In Oklahoma the curtailment is reflected in all but a few of the refineries. Most of them are running on schedules smaller by a few hundred barrels. Three refiners, the Eason Oil Co., the Johnson Oil Refining Co., and the Phillips Petroleum Co. will increase their crude runs. The Continental Oil Co. at Ponca City reports the largest decline in the State with daily crude runs to stills 4,500 bbls. less in October than in September.

East Texas

Although East Texas refiners feel the pinch of a slackened demand for their products there was no evidence early in October that refinery crude runs for the month would be at great variance with those of September when an average of more than 90,000 bbls. of crude were run daily. At times the average exceeded 100,000 bbls. Suspension of the major company's purchase plan has caused some refiners to shift their original position. At the present the field is divided into two groups, those who desire to limit runs and support the market and those who seem intent upon running all the crude they can segregate. It is no secret that under the existing refined oil market profits are slim and one is led to the conclusion that where any stubborn determination to run a maximum quantity of crude is evidenced the crude is coming into the plant for considerably less than a dollar a barrel. Persistence in running a large quantity of crude is due entirely to the fact that excess oil is made available at prices ranging down to 25 cents a barrel. The older and more substantial refiners in the East Texas Field are as fearful of the consequences as refiners on the outside and in the past week a movement was undertaken to drive the "tea kettle" refineries from the field by posting abnormally low tank wagon prices, but this can only give temporary relief if producers continue to offer oil below the market.

The list of East Texas plants shows less than the usual number of name changes and there have been no new plants added. The most important change was the completion of the sale of the Taylor Refining Co.'s plant at Tyler to the McMurray brothers and the plant is now operating as the Tyler Texas Oil & Refining Co.

Mid-Continent Refinery Operations

Average Daily Crude Runs (Barrels)
(Based on estimates compiled first of each month by The Oil and Gas Journal)

	1929	1930	1931	1932	1933	1934
January	508,550	535,460	478,795	405,910	399,405	448,360
February	506,800	519,355	470,125	411,280	407,125	456,619
March	514,950	531,500	449,634	401,155	423,445	465,680
April	530,530	555,250	497,391	419,391	441,000	458,220
May	577,500	574,300	510,540	436,160	470,460	457,165
June	583,030	572,250	567,915	440,765	479,987	459,908
July	565,800	548,475	588,840	433,255	525,845	477,012
August	555,250	526,400	590,545	427,710	518,510	501,750
September	552,300	498,710	588,105	430,430	526,749	499,830
October	544,720	518,800	472,190	401,995	495,756	500,755
November	545,473	506,700	480,440	408,180	481,335	.....
December	540,630	478,360	456,525	416,275	434,275	.....

Operations by Refinery Districts

	Oct. dly. crude capacity	Oct. dly. crude runs	Sept. dly. crude runs	Oct. daily increase
Arkansas	41,550	22,150	21,250	900
East Texas	219,370	100,360	103,450	5,910
Kansas	177,950	94,750	92,050	2,700
North Central Texas	107,500	37,705	37,300	355
North Louisiana	55,450	33,050	32,350	700
Oklahoma	289,500	136,090	144,050	*7,960
Southwest Texas	26,600	13,830	13,130	700
West Texas and Panhandle	105,475	53,820	56,250	*2,430
Total	.....	500,755	499,830	925

*Decrease.

OKLAHOMA

Company and location—	Daily capacity	Aver. daily runs— October	September
Anderson-Prichard Oil Corp., Cyril	6,000	3,930	4,590
Altitude Petroleum Corp. (J. H. Peacock Refining Co.), Oklahoma City	3,000	(*)	(*)
Associated Petroleum Corp., Allen	8,000	(*)	(*)
Barnsdall Refineries, Inc., Barnsdall	6,000	3,500	3,500
Barnsdall Refineries, Inc., Okmulgee	10,000	3,500	3,000
Bell Oil & Gas Co., Grandfield	4,500	2,000	2,200
Black Gold Refining Co., Oklahoma City	2,500	1,500	1,500
Century Petroleum Corp., Oklahoma City	2,500	(*)	(*)
Champlin Refining Co., Enid	15,000	6,000	6,000
Continental Oil Co., Ponca City	30,000	16,000	20,500
Crescent Refining Co., Holdenville	1,000	(*)	(*)
Cushing Refining & Gasoline Co., Blackwell	1,700	1,500	1,500
Cushing Refining & Gasoline Co., Cushing	4,500	2,500	2,500
Deep Rock Oil Corp., Cushing	10,000	9,000	9,000
Eason Oil Co., Enid	5,000	2,500	1,900
Empire Oil & Refining Co., Okmulgee	4,000	2,100	2,170
Empire Oil & Refining Co., Ponca City	12,000	6,450	6,700
Gem Refining Co., Oklahoma City	1,000	(*)	(*)
Globe Oil & Refining Co., Blackwell	7,500	6,000	6,000
Government Refining Co., No. 1, Oklahoma City	1,000	(*)	(*)
Government Refining Co., No. 2, Seminole	800	(*)	(*)
Government Refining Co., No. 3, Oklahoma City	3,500	100	60
Hanger Refining Co., Oklahoma City	1,000	50	40
Johnson Oil Refining Co., Cleveland	6,000	4,400	3,500
Major Petroleum Products Co., Oklahoma City	2,000	500	500
Marathon Oil Co., Bristow	5,000	2,000	2,170
Mid-Continent Petroleum Corp., West Tulsa	40,000	18,000	19,000
Monarch Refining Co., Oklahoma City	1,000	(*)	60
Phillips Petroleum Co., Okmulgee	6,000	4,650	4,000
Producers & Refiners Corp., West Tulsa	6,000	(*)	(*)
Pure Oil Co., Muskogee	9,000	4,200	4,200
Rock Island Refining Co., Beckett	6,000	3,200	3,200
Sinclair Refining Co., Sand Springs	3,000	2,600	2,600
Sun Oil Co., Yale	5,000	3,000	3,000
Sunray Oil Co. (C. E. Wright, receiver), Allen	7,000	3,000	2,000
Texas Co., West Tulsa	15,000	12,000	13,000
Texas Pacific Coal & Oil Co., Wynnewood	3,000	600	600
Tide Water Oil Co., Drumright	15,000	9,000	10,000
Triangle Producing & Refining Co., Oklahoma City	1,000	500	600
Wilcox Oil & Gas Co., Bristow	5,000	3,500	3,500
Wirt Franklin Petroleum Corp., Ardmore	4,000	1,600	3,150
Yale Oil Corp., Yale	3,000	(*)	(*)
Paramount Refining Co., Oklahoma City	3,000	700	800
Total	289,500	136,090	144,050

*Shut down.

KANSAS

Company and location—	Daily capacity	Aver. daily runs— October	September
Barnsdall Refineries, Inc., Wichita	4,000	2,000	2,000
Derby Oil Co., Wichita	8,000	4,500	4,500
Dickey Refining Co., McPherson	5,000	1,000	1,000
Eldorado Refining Co., Eldorado	5,000	3,500	3,500
Falcon Refining Co., Inc., Great Bend	700	500	500
Globe Oil & Refining Co., McPherson	10,000	7,500	7,500
Golden Rule Refining Co., Wichita	1,500	(*)	(*)
Kanotex Refining Co., Arkansas City	12,000	3,500	5,000
Kansas Gas & Gasoline Co., Winfield	500	100	100
Kreuger Refining Co., Laton	150	50	50
National Refining Co., Coffeyville	6,500	4,500	4,500
Petroleum Products Co., Chanute	1,000	1,000	700
Phillips Petroleum Co., Kansas City	15,000	10,000	6,500
Security Petroleum Co., Chase	3,100	(*)	1,200
Shell Petroleum Corp., Arkansas City	30,000	11,000	12,000
Sinclair Refining Co., Coffeyville	13,500	6,000	6,000
Sinclair Refining Co., Argentine	9,500	5,400	5,500
Skelly Oil Co., Eldorado	23,000	13,500	12,000
Standard Oil Co. of Kansas, Neodesha	20,000	5,000	5,000
United Oil & Refining Co., Hutchinson	1,500	(*)	(*)
Vickers Petroleum Co., Potwin	3,500	2,200	2,000
White Eagle Refining Co., Augusta	16,000	12,500	12,500
Total	177,950	94,750	92,050

*Shut down.

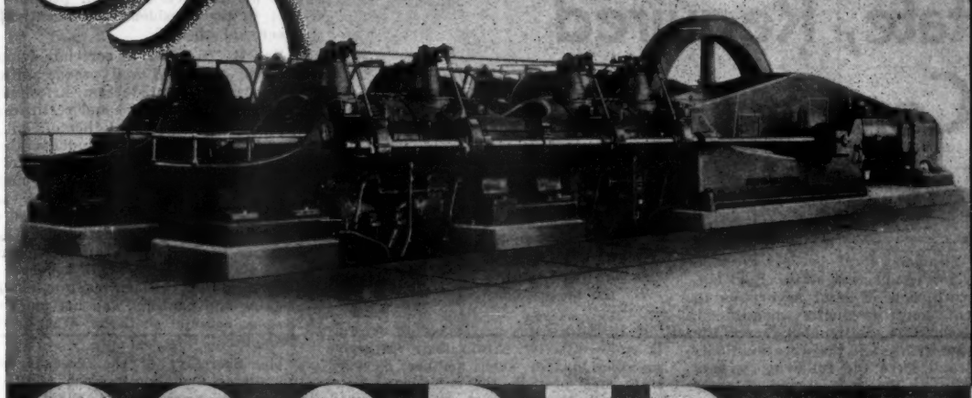
WEST TEXAS AND PANHANDLE

Company and location—	Daily capacity	Aver. daily runs— October	September
Active Oil Co., Arno	1,500	(*)	(*)
Aero Refining Co., Pecos	225	200	200
Coltex Refining Co., Colorado	12,500	6,000	7,500
Concho Refining Co., San Angelo	250	120	50
Cosden Oil Co., Big Spring	12,500	7,000	7,500
Danciger Refineries, Inc., Pampa	6,500	5,000	6,500
Howard County Refining Co., Big Spring	1,500	300	300
McNutt Refining Co., El Paso	2,000	500	500
Panhandle Refining Co., Kings Mill	2,000	1,400	1,700
Paramount Refining Co., San Angelo	2,000	(*)	(*)
Pasotex Refining Co., El Paso	14,000	5,500	5,500
Phillips Petroleum Co., Borger	30,000	21,000	20,000
Shamrock Oil & Gas Co., Sunray	3,000	1,200	1,000
Shamrock Oil & Gas Co., Meldavis	1,500	900	900
Sinclair Refining Co., El Paso	3,500	600	600
Texas Co., El Paso	2,000	700	700
Texas Co., Amarillo	4,000	3,000	3,000
Wes. Texas Refining Co., Pecos City	6,000	(*)	(*)
Wickett Petroleum Co., Wickett	2,500	400	400
Total	105,475	53,820	56,250

*Shut down.

(Continued on Page 44)

OK THEY'RE COOPER-BESSEMERS



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Proposed Draft of Legislation, Federal and State, Required For Interstate Compact

During the hearings at Washington before the House subcommittee investigating the oil situation, discussion of the proposed interstate compact referred to the model legislation suggested by Northcutt Ely in his "Oil Conservation Through Interstate Compact," published by the Federal Oil Conservation Board.

This model legislation includes a proposed draft of a bill to be enacted by Congress authorising an interstate compact by the oil-producing states and drafts of bills to be submitted to the state legislatures, one after congressional action and the other prior to action by Congress. The latter is of special interest in view of Mr. Marland's announced intention to initiate the matter in Oklahoma.

The drafts follow:

Model of Act of Congress to Authorize Compact

An act for the conservation of oil and gas and protection of American sources thereof from injury, correlation of domestic and foreign production, and consenting to an interstate compact for such purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That consent is hereby given to any three or more of the oil-producing states to negotiate and enter into a compact or agreement for the following purposes, or any of them: Provided, That any such compact or agreement shall not take effect until the same shall have been approved by the Congress of the United States and by three of the States of Texas, Oklahoma, California, Kansas, and New Mexico, and proclaimed by the President as provided in Section 3 hereof:

(a) Said states may agree upon uniform principles and for enactment of laws in their respective states for the conservation of oil and gas and the prevention of premature exhaustion of American sources of supply, including provisions effecting any or all of the following objectives:

1. Requirement of the most effective and economic use of reservoir energy.
2. Equitable apportionment of the contents of a common source of oil or gas.
3. Regulation and control of drilling, producing, and operating methods, so as to promote maximum ultimate economic recovery.
4. Retention underground of oil and gas whose production would be excess of transportation or marketing facilities or reasonable market demand, and when required to preserve the oil pools of settled production.
5. Prohibition of waste of all kinds, both physical and economic, whether occasioned by breach of the foregoing objectives or otherwise.
6. Ratable taking of production of oil and gas from competing fields and from wells within the same field.
7. Authorising unit operation of a single oil or gas field or area.

(b) Said states may agree to establish an interstate advisory board, one of whose members shall be appointed by each of the compacting states. Said body shall, with such Federal agency as the President may designate, constitute a joint committee, designated hereinafter as the Interstate Oil Conservation Board, which shall have the following powers; provided that the concurrence of a majority of the Federal representatives as designated by the President shall be required in any action taken by the said board affecting interstate or foreign commerce:

1. To make and publish, as of April 1 and October 1 of each year, or oftener if required, an estimate of the quantities of oil and products thereof required during the succeeding six months (a) from domestic production, and (b) from withdrawal from storage within the United States, and (c) from importations from foreign countries, in order to supply, without undue injury to domestic sources of petroleum (1) the estimated demand for consumption within the United States and (2) the estimated demand for export from the United States.
2. To certify to the Secretary of the Treasury, and the governors of the compacting states, the foregoing estimates.
3. To recommend to the several oil-producing states quotas of production from each state in accordance with said estimates.
4. To approve agreements entered into upon its recommendation for the purpose of conserving the oil and gas resources of said states.
5. To recommend to the oil-producing states laws and regulations for the economic production, refining, and distribution of oil and gas, and for the protection of the consumers thereof.
6. To co-operate with such agencies of the United States as Congress may authorize for the co-ordination of imports and agreements with foreign producers.
7. To collect data on refinery runs and shipments of gasoline and other products of petroleum taxed by the compacting states, and to furnish such data to them and to such other states as may request it, for their mutual assistance in checking tax evasions.
8. To make by-laws for its own procedure.

(c) Said states may agree to severally make effective within their respective jurisdictions, in such manner as each state may provide, the recommendations of such body as may be established pursuant to Section 1(b) of this act.

Sec. 2. The oil and gas conservation laws of the states, whether now or hereafter enacted, in so far as they effect the objectives set forth in Section 1(a) of this act or any recommendations or agreements made pursuant to Section 1(b) of this act, shall not be deemed an unwarranted interference with commerce with foreign nations and among the several states.

Sec. 3. The Interstate Oil Conservation Board shall not be authorized to fix prices at which oil or products thereof shall be sold, nor to make any determination or recommendation which will unreasonably increase or depress prices; but in estimating demand it shall do so with reference to reasonable prices only, and the necessity for maintenance thereof over the maximum possible period.

Sec. 4. Any compact entered into pursuant to the authorization of this act may be agreed upon by ratification or by the enactment of reciprocal legislation, and be terminated in such manner, and provide for the adherence or withdrawal of states in such manner as the compacting states may designate.

The Congress reserves the right at any time to withdraw its consent from, and terminate, any such compact. The President is hereby authorized, upon adoption by three or more such states of a compact in accordance with the terms hereof, to so declare by proclamation, and thereupon such compact shall become in force as to such compact states; and thereafter in like manner the President is authorized to declare such compact effective as to other oil and gas-producing states joining therein.

Sec. 5. The President is hereby authorized to appoint a representative of the United States who shall preside over the negotiation of the compact authorized by this act. He shall promptly report to the President the execution and enactment thereof.

Sec. 6. In order to correlate importations of crude oil and products thereof with American production in supplying the demand determined and certified pursuant to Section 1(b) hereof, all importations of oil and products thereof shall not exceed 5½ per centum of the total estimated demand for consumption within the United States and for export from the United States, as certified pursuant to Section 1(b) of this act. Of the quantity of such importations, not more than 55 per centum shall be crude oil, not more than 16 per centum shall be gasoline and naphtha, and not more than 29 per centum shall be other refined products.

The Secretary of the Treasury shall promulgate and enforce such regulations as may be necessary to make this section effective and to prevent discrimination among prospective importers. He shall issue in advance certificates, entitled "certificates of import," to permit bona fide importations thereunder, and no importations shall be admitted unless such certificates have been issued therefor: Provided, that the foregoing limitations may be exceeded by certificates to admit importations of crude oil for refining in the United States, all the products of which are in fact thereafter exported (including furnishing in American ports as bunker oil to vessels engaged in foreign commerce): Provided further, that in the event that applications for certificate of import shall exceed the limitations provided by this section, the Secretary of the Treasury shall make an equitable apportionment within such limitations among the conflicting applicants and may consider, among other factors, the relative quantities of American production currently exported by each.

A draft of a Federal statute having been suggested, the next step is the consideration of a state statute similarly authorizing negotiation of an agreement.

Outline of State Bills Authorizing Negotiations

The following is a draft of a state statute authorizing the state's representative to negotiate a compact. It is drawn on the assumption that the Federal authorizing act would precede it. Another draft providing for a different order of procedure follows it.

A Statute Preceded by Federal Authorization

An act authorizing the negotiation of an interstate agreement or compact for the conservation and stabilization of the American petroleum supply.

Be it enacted, etc.

Section 1. The governor of this state is authorized to appoint a representative to meet with representatives to be appointed by other oil-producing states, pursuant to the authorization contained in the act of Congress approved ..... (....Statutes....), for the purpose of negotiating an agreement or compact for the conservation and stabilization of the American petroleum supply as provided in that act.

Sec. 2. Such agreement or compact, if one is made, may be in the form of reciprocal legislation which the representative of this state shall recommend to the consideration of the legislature, or in the form of an instrument to be signed by the representatives of the compacting states.

Sec. 3. No agreement or compact authorized by this act shall bind this state unless and until it shall be ratified by

(Continued on Page 51)

Bills Affecting the Petroleum Industry Awaiting Oklahoma Legislature

OKLAHOMA CITY, Okla., Oct. 8.—The oil industry in Oklahoma will probably face a group of bills when the legislature convenes in January. One will be that favoring oil states compacts. E. W. Marland, Democratic nominee for governor, has already stated he will ask such legislation.

Some step may be taken to amend the present proration bill to further conserve natural gas, especially in fields where there is a large gas volume with the oil, as in the Oklahoma City Field and in the new Edmond Field. Proponents of the oil-gas ratio method will demand that such a clause be written into the present law, and it is expected the Oklahoma City Field will be cited as an example of what might have been prevented had the last legislature incorporated this measure in House Bill No. 481.

An attack likely will be made on the present proration system. One small group of operators is writing senators demanding a clause to consider acreage as a basis of prorating the production. Another group has been asking the umpire and the Corporation Commission to change the rule so recently completed wells might be given back allowables in order to equalize all wells in a given area.

It is charged that the per well basis of prorating is unfair, especially since some wells are on 10-acre units, while others are on tracts as small as three city blocks. In a case pending before the commission land and royalty owners charge they were deprived of 5,000,000 bbls. of oil drained by offsets, since they were restrained by drilling wells within the city's drilling zone.

Another suggested bill would require operators to secure permits from the State before starting wells, with rigid restrictions to govern size of leases, proximity to houses, etc., and to further curtail drilling.

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Time for Show-down

There has been but one topic during the week, the possibility of a cut in crude prices.

The Federal Petroleum Administration and the oil industry have reached a critical point where definite action, one way or another, must be taken.

Excess production in East Texas is now estimated between 120,000 and 130,000 barrels daily while gasoline is being offered there at the lowest price since the field was discovered with perhaps the single exception of the period when crude was being sold for ten cents a barrel.

In the face of that increasing torrent of overproduction talk of regulation is reduced to absurdity. The law passed giving the State Railroad Commission jurisdiction over intrastate shipments of petroleum products cannot become effective until Christmas, leaving the situation so far as State regulation is concerned just where it was. Nor is there any guarantee that when the law becomes effective it will not be made the basis for another injunction suit with further prolongation of defiant violation.

Those who cannot pay a dollar for crude and meet the competition of "hot" oil products are clamoring for a cut in crude prices. It is easy to show that products cannot be made from dollar crude and sold at such prices without a loss. But is it clear that cutting the price of crude will stop "hot" oil competition? Will not the cheapening of crude invite the making of more gasoline and further flooding of the market?

Is it not the ready availability of "hot" oil rather than the price of legitimate crude that is the basic trouble? If crude were cut to 75 cents or to 50 cents the "hot" oil production would still be there.

"Hot" oil cannot be shut off by cutting the price of legitimately produced oil to any figure that the industry could endure.

The price paid for legitimate oil means nothing to the "hot" oil producer. Dollar oil failed to induce him to quit overproduction. When East Texas oil was down to 25 cents he was still doing business. When it comes to cutting the price of gasoline he has advantages of his own not open to legitimate competitors.

If the old price cut remedy, so often relied upon in older days of temporary overproduction, had been of any avail to cope with East Texas it would have operated long before this.

The East Texas sore can not be cured by a poultice; it requires an operation.

Pending effective State regulation under the new law covering intrastate transportation of "hot" oil and its products the one legal and constitutional remedy resting with the Federal administration is the control of interstate transportation in excess of State allowables.

There has been no concerted effort on the part of Federal agencies to exercise such control in East Texas.

The industry, bewitched by "dollar" oil, has permitted itself to be lured to the brink of the abyss of complete Federal control in every activity. Months have been wasted in endless unravelings of meaningless interpretations of useless or mischievous rulings.

The time has come for a show-down. The President has said that the purpose of the recovery policy was that industry might govern itself. But in the case of the oil industry the representatives of the industry have found themselves subject to the supervision of a specially constituted authority, not to be found in any other industrial code, created outside the industry and with no special knowledge or qualifications for direction of the oil business.

Instead of being treated with business-like dispatch, the problems of the oil industry have been subjected to all the circumlocution and jurisdictional duplication and delay inseparable from governmental office. Minor matters have been exaggerated to undue dignity and matters of first importance have been buried under a mountain of minutiae.

The original code has been so amended and revised and interpreted and reinterpreted that possibly no one in the industry can now state exactly what it is.

Meanwhile, the original problem, the curbing of excess production, has not been dealt with and returns today as menacing as when the code was first promulgated.

The industry has been loyally endeavoring to co-operate with the Federal administration. The time has now arrived for the Federal administration to co-operate with the industry, to lay aside the assumption that the government can manage the oil business and restrict itself to its proper constitutional duty of carrying out the stated purpose in the code of assisting State regulation by control of interstate transportation in excess of allowables.

The fundamental error, at the outset, was in not marking a clear line between administration of the law and management of the oil business. Governmental intrusion into business has inevitably been disastrous. Theory and inexperienced authority are monkey-wrenches that can wreck any business.

The representatives of the industry at Washington and the industry at large should insist upon a house cleaning that will clear away the cobwebs that cover the code, free the industry from the risk of official "clerical errors," and set the oil administration at its appointed task of enforcing that part of the code assigned to it, stopping interstate traffic in illegal production.

The appointment of an executive assistant to Administrator Ickes may concentrate and facilitate Federal activities in checking interstate movement of "hot" oil.

East Texas capacity to produce "hot" oil is limited only by its outlets and the life of the field. That was proved when the production was doubled during the gasoline buying campaign. It was proved also when a glut of oil at Gulf ports left cars standing at the terminals, piling up demurrage charges. Lack of storage in the field and blocking of the outlet at the Gulf slowed down the "hot" oil output within a week.

An effective enforcement of the prohibition against the transportation of "hot" oil in interstate commerce would shut off the production to a negligible volume within ten days.

A week of that enforcement would do more to solve the immediate problem of the oil industry than all the hubbub of the past year or more at Washington. It would show what could be done.

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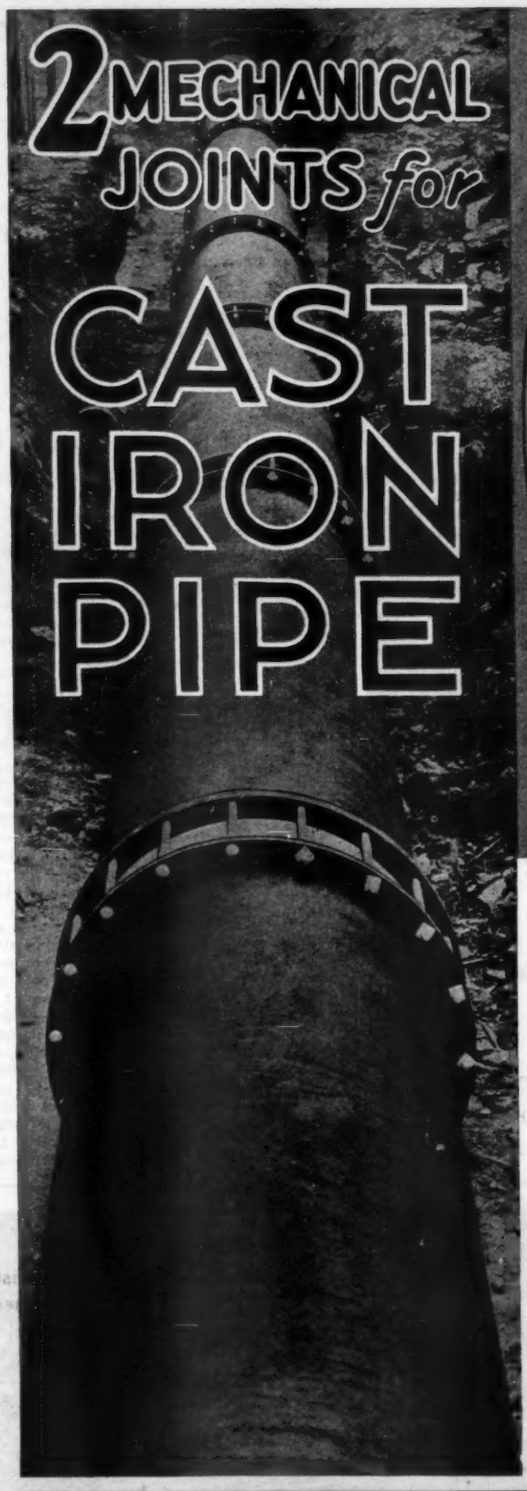

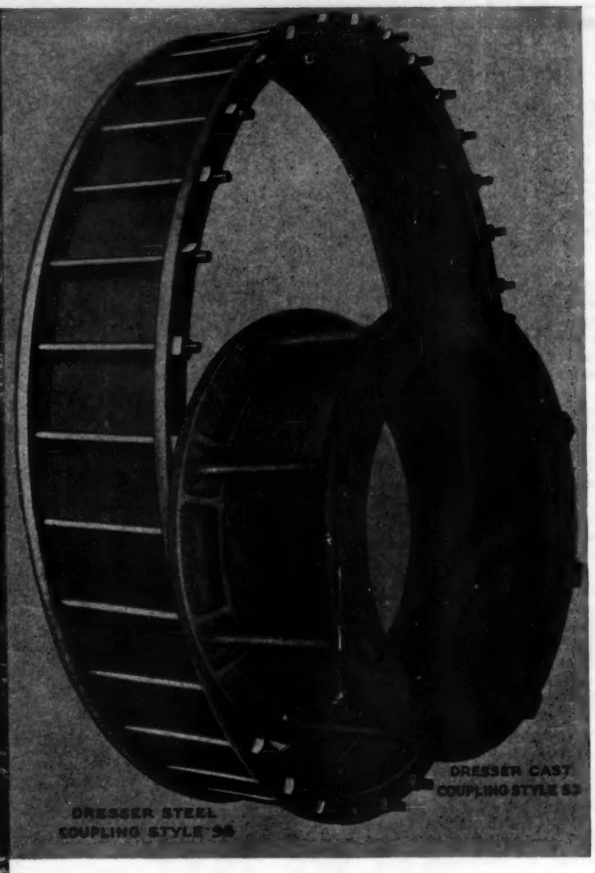

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NEWS FROM FOREIGN LANDS

GREAT BRITAIN

The possibility of commercial exploitation of its oil resources is again arousing keen interest in Somerset County, England, according to a report from Vice Consul John F. Claffey, Bristol. West Somerset, the report says, is closely following the attempts on the part of the government to enact a bill with the object of encouraging the search for oil in Great Britain.

Somerset, it is pointed out, is known to be one of the wealthiest counties in the country for oil-bearing shale. Experiments have recently been made at Kilve, near Bridgewater, where it is estimated there are over 9,000,000,000 tons of oil shale for treatment, the report states.

Ten years ago high hopes were entertained of placing the Somerset oil deposits on a commercial basis. At that time a survey and tests showed that over a stretch of country nearly 10 miles in length and about 2½ miles in breadth there was nothing but shale beneath, covered for the most part with a thin layer of soil. Moreover, it extended to a depth of about 1,000 feet.

The oil-bearing shale was available for working at a small cost, as there was no need for mining. The cliffs alone afforded a supply that would feed many kilns, by the simple use of explosives and the laborer's pick for an indefinite period. Subsequent developments led to the formation of a syndicate, which after obtaining the necessary options, proceeded to erect an extracting kiln on the shore near Kilve. The project was not successful and the kiln was eventually closed down, the vice consul reported.

Herbert Green & Co., Ltd., has been organized in England for the purpose of building and operating a lubricating plant at Lincolnshire incorporating the Duo-Sol process, having secured a license for the latter from Max B. Miller & Co., New York City. The plant, which will have a capacity of approximately 275,000 bbls. annually, will be devoted to the manufacture of bright stocks.

It is understood that it is the intention of the owners to furnish a substantial part of the heavy lubricating oil stocks used by compounders in England, now largely imported. The company, by not manufacturing finished lubricating oils, will be in a position to take advantage of certain preferential tariffs which will add to the attractiveness of the plant operation.

MEXICO

The Mexican Eagle Oil Co. (Shell) last week posted a bond of 36,000,000 pesos (approximately $10,000,000) at Mexico City in filing an appeal with the Supreme Court to a recent decision of a lower court in favor of the Compana Petrolera Comercial. The bond is said to be the largest in Mexican history.

The judgment of the lower court against the Mexican Eagle company was for 20,000,000 pesos, involving title to the tract in the State of Vera Cruz which a number of years ago produced several million barrels of crude oil. The main features of this case were explained in the October 4, 1934, issue of The Oil and Gas Journal, page 18.

The threatened strike of employes of the Huasteca Petroleum Co. (Standard of New Jersey) was avoided last week when employers and employes agreed to submit the issues involved to President Abelardo Rodrigues. The president several weeks ago arbitrated labor disputes of the Mexican Eagle Oil Co. (Shell). Most of the issues in that case, including the principle of collective bargaining, higher wages and shorter hours of employment, were decided in favor of the employes.

U. S. S. R.

Oil operations during August in the U.S.S.R. were slightly less than in July, the peak month of the year. In all phases of operations it had been expected that activity would increase in line with the government's plan for the remainder of the year but the official report shows that there was a slight decrease in crude oil production in August, and a larger decline in drilling activities with crude runs to stills reduced.

Expressed in barrels daily the crude oil production in August averaged 460,900 bbls., which compares with 461,800 bbls. in July and 432,400 bbls. in August of last year. Crude runs to stills averaged 407,000 bbls. in August, 414,000 bbls. in July and 377,300 bbls. in August, 1933. Drilling operations decreased 10,000 meters in August compared with July, but were still running about 50 per cent ahead of last year.

Based on the accumulative figures for the first eight months of this year crude oil production this year is running 17.2 per cent ahead of last year. This is slightly less than the accumulative data earlier in the year which showed increases of 19 to 20 per cent. The August production was only 79 per cent of the government plan for that month and for the entire month the production has been about 82 per cent of the plan.

In the drilling end U.S.S.R. operations for the first eight months was 75 per cent ahead of the same period last year but it is about 10 per cent behind the government program for that period with August 15 per cent below.

In refinery operations crude runs to stills for the first eight months were 8 per cent ahead of first months of 1933. Despite this increase in crude runs to stills gasoline output so far this year has been less than 2 per cent ahead of last year with the August production less than August, 1933. Production of kerosene distillate and some of the other refinery products has shown a substantial increase over the same period last year. It is understood that the government is more anxious to increase the supplies of the heavier products for domestic consumption than it is in increasing the gasoline output, a substantial part of which is exported.

PETROLEUM IN THE U.S.S.R.

Preliminary Figures for August, 1934, and Revised Figures for July, 1934

	August, 1934	Pct. of plan	July, 1934	August, 1933	8 mos., 1934	8 mos., 1933	1934 pct. of 1933
Production of Crude Oil							
Azneft	1,629,900	86.2	1,624,500	1,399,100	12,493,100	9,297,100	134.4
Groznef	275,000	59.1	290,400	415,500	2,458,300	3,427,700	71.7
Maineft	79,300	79.3	72,600	52,900	574,300	384,700	149.3
Embaneft	21,000	52.5	22,400	16,100	157,500	133,000	118.4
Other trusts	35,900	40.7	35,400	29,100	248,100	346,300	71.6
Total	2,041,100	79.0	2,045,300	1,914,700	15,931,300	13,588,800	117.2
Drilling (in meters)							
Azneft	60,009	87.6	67,896	35,168	509,381	301,567	168.9
Groznef	37,468	87.1	30,155	14,767	218,432	89,620	243.7
Maineft	6,174	103.3	5,237	5,573	37,853	27,933	135.5
Embaneft	4,837	74.3	6,999	3,562	31,031	26,386	117.6
Other trusts	11,602	50.1	11,869	10,129	82,666	58,430	148.3
Total	110,080	85.5	122,156	72,199	879,363	503,936	174.5
Consisting of:							
Production drilling	68,719	79.7	81,741	49,859	669,430	324,310	187.9
Wildcatting:							
Producing fields	25,416	107.8	25,918	10,285	165,896	104,456	158.8
In new areas	15,895	84.3	14,497	12,055	104,037	75,170	138.4
Runs to Stills							
Azneft	1,143,500	98.6	1,157,600	1,079,700	9,015,100	8,060,800	111.8
Groznef	625,500	75.0	641,400	559,400	4,819,000	4,003,400	120.4
Aviafuel	31,800	101.0	31,100	29,000	167,800	186,500	90.0
Sredazneft	4,800	53.3	3,500	3,000	27,500	27,300	100.7
Total	1,805,600	88.8	1,833,600	1,671,100	14,029,400	12,278,000	114.3
Production of Gasoline							
Azneft	100,300	100.6	106,500	80,300	793,900	647,900	122.5
Groznef	131,400	73.9	132,500	168,200	1,116,900	1,151,200	97.0
Aviafuel	10,600	62.6	1,900	2,700	24,300	17,100	142.1
Sredazneft	500	52.6	300	200	2,800	2,100	133.3
Total	241,600	83.3	235,000	251,900	1,842,900	1,818,300	101.4

CHILE

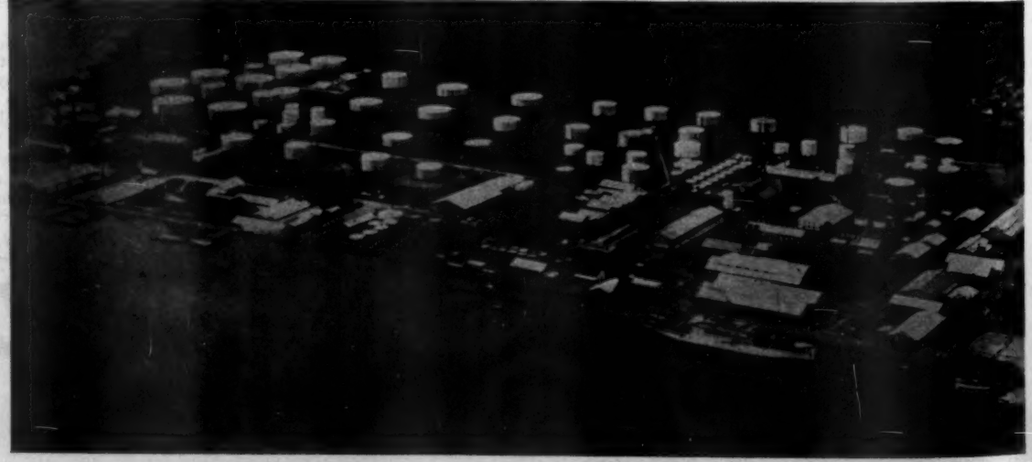
After having spent approximately a million dollars in the past six years in attempts to locate and exploit oil fields in Chile with negative results, the government is now considering modifying the existing law so that private companies may participate in such enterprises, according to a report from the American consulate general, Santiago, made public by the Commerce Department.

At the present time, the report points out, not only production, but distillation, refinement, and even the sale of subproducts of petroleum are monopolies of the state. Imports, however, are handled by private concerns, including American interests. In 1933, such Chilean imports included 717,000 hectoliters of gasoline in bulk, 87,800 hectoliters of kerosene in bulk and 7,796 metric tons of paraffin wax.

The Chilean Ministry for the Promotion of Industry is now drafting a bill which proposes approval of corporations receiving three classes of concession, provided that 60 per cent of their capital is held by Chilean citizens. These grants are those of exploration, drilling and operation. The concessionaire would pay a license fee to the state based on the area in which operations were conducted.

In the event that the exploration work proved successful the concessionaire must deliver to the state 10 per cent of the production, either in money or in oil, and at the expiration of 30 years all oil lands will revert to the state. The proposed bill also provides that substantial bonuses may be paid to successful operators and that import duties on foreign oil machinery, not obtainable in Chile, may be lifted, according to the report.

The 60 per cent requirement of ownership of stock by Chileans may prove a stumbling block to production, in the opinion of certain local authorities, who point out that the large sums necessary for development of oil fields are not readily available in the country, it was stated.



—Photo, K. N. I. L. M.

Aerial view of Bataafsche Petroleum Maatschappij installations at Pladjoe, Sumatra, Dutch East Indies

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THE NATIONAL SUPPLY COMPANY

Group 3 Refiners Talking About Crude Cut, But Market Observers Say This Is Improbable

By T. F. SMILEY

With furnace oil commanding a higher price than East Texas gasoline and general agreement that the posted price of crude was wholly out of line with current quotations for motor fuel, the Oklahoma (Group 3) market was waiting uneasily this week for something to break. What this something might be was a matter of speculation. A widely voiced opinion among refiners was that a crude price cut was probable.

There were guesses at what the new price of crude in East Texas would be if the predicted cut should materialize. Some placed it at 50 cents. This is just half the present posted price, which has prevailed since September 29, 1933. It is a matter of common knowledge, however, that enormous quantities of illegally produced crude have been sold at 30, 35 and 40 cents, so it was argued by others that to be in the least effective as a curb to production the price would have to be cut to 25 cents.

The only thing that had prevented a crude price cut before this, it was said, was the indisposition of each buyer to be the one to initiate the reduction. Although there is not unanimity among buyers concerning the advisability of a crude cut, the belief was expressed that once some company did announce a cut there would be a general, and for the most part willing, falling into line by the others, first by the smaller independent refiners and then by the majors. Market gossip pointed to one of the large integrated companies as being the one most likely to take the first plunge.

Notwithstanding the amount of talk about the likelihood of a price cut, there were market students who declared this talk would not crystallize into action. To begin with, they pointed out, the price of oil is not too high. The trouble is that the price of gasoline is too low. The cure for a disorganized gasoline market, they said, lies not in creating further demoralization by reducing crude prices, but in action by the Government, under the constitution, to stop movement of illegal oil and its products in interstate commerce. They expressed conviction that this was the view of cooler heads in the industry and that it was the one which after all would prevail.

The motor fuel market was shaky. An abundance of U. S. Motor material was available in East Texas at 2⅝ cents for reselling (Group 3 basis), and sales of distress stocks were reported at still lower prices. Brokers were trying on Tuesday to get U. S. Motor low-octane gasoline at 2 cents and 400 endpoint at 2⅛ cents, but none of them was said to have been successful. A growing number of marketers were inclined to believe the bottom in gasoline prices had been reached, but this feeling was not strong enough to stimulate buying.

Some of the majors were reported to be ordering out East Texas gasoline at 5 cents under October contracts entered into before the sudden suspension of the P. and C. Committee buying program two weeks ago.

Natural at Peak of Season

Natural gasoline was firm. The supply in North Texas was reported to be completely sold up to the middle of October, with prices stiffened. The Oklahoma supply was somewhat easier, but manufacturers reported the movement was sufficiently large to foreshadow a steady market for weeks ahead.

Natural gasoline now is at the peak of its consuming season, and a satisfactory market is looked for till late November, with a possibility of its continuing into December.

Illustrative of changed conditions, the 26-70 grade, selling today in the Group 3 market at 3 cents, was commanding 5 cents at this time last year, and it held that price till the last week in November. It was January before the price fell below 3 cents.

Any action producing a strong and healthy market for straightrun gasoline probably would quicken the demand for natural, but hardly enough to create a higher level of prices.

Export buying of 41-43 kerosene in East Texas helped the market for that material somewhat, but the supply in other areas was more than enough to meet demands and prices for both that grade and the 42-44 underwent no change.

Furnace Oils Weak

Furnace oils were weaker, with price recessions throughout the list. Important refiners in the Chicago district were said to have thrown large quantities onto the market recently, and this along with a spell of mild weather, was believed to have been a factor in depressing quotations in the Group 3 area.

The demand for gas oil for cracking stock continued to recede and quotations lost another eighth.

No noteworthy change in the lubricants was reported and prices were unchanged from the previous week. The demand for wax continued strong.

Refined Oil Market Barometer

A disordered gasoline market in most areas waited for announcement of some constructive program. Price wars reported in various areas. Hope was expressed that the Planning and Coordination Committee, meeting in Washington this week, would decide upon a definite and constitutionally workable plan for the elimination of illegal oil operations in East Texas. Although there was much talk about the likelihood of a cut in crude prices, close students of the market expressed doubt that it would get beyond the talk stage. A good market for natural gasoline is in prospect for several weeks.

Mid-Continent.—Gasoline demoralized. Naturals strong. Kerosene lagging. Lubricants steady. Wax strong.

East Coast.—Gasoline unsettled. Fuels down. Steam-refined stocks weak. Wax less firm.

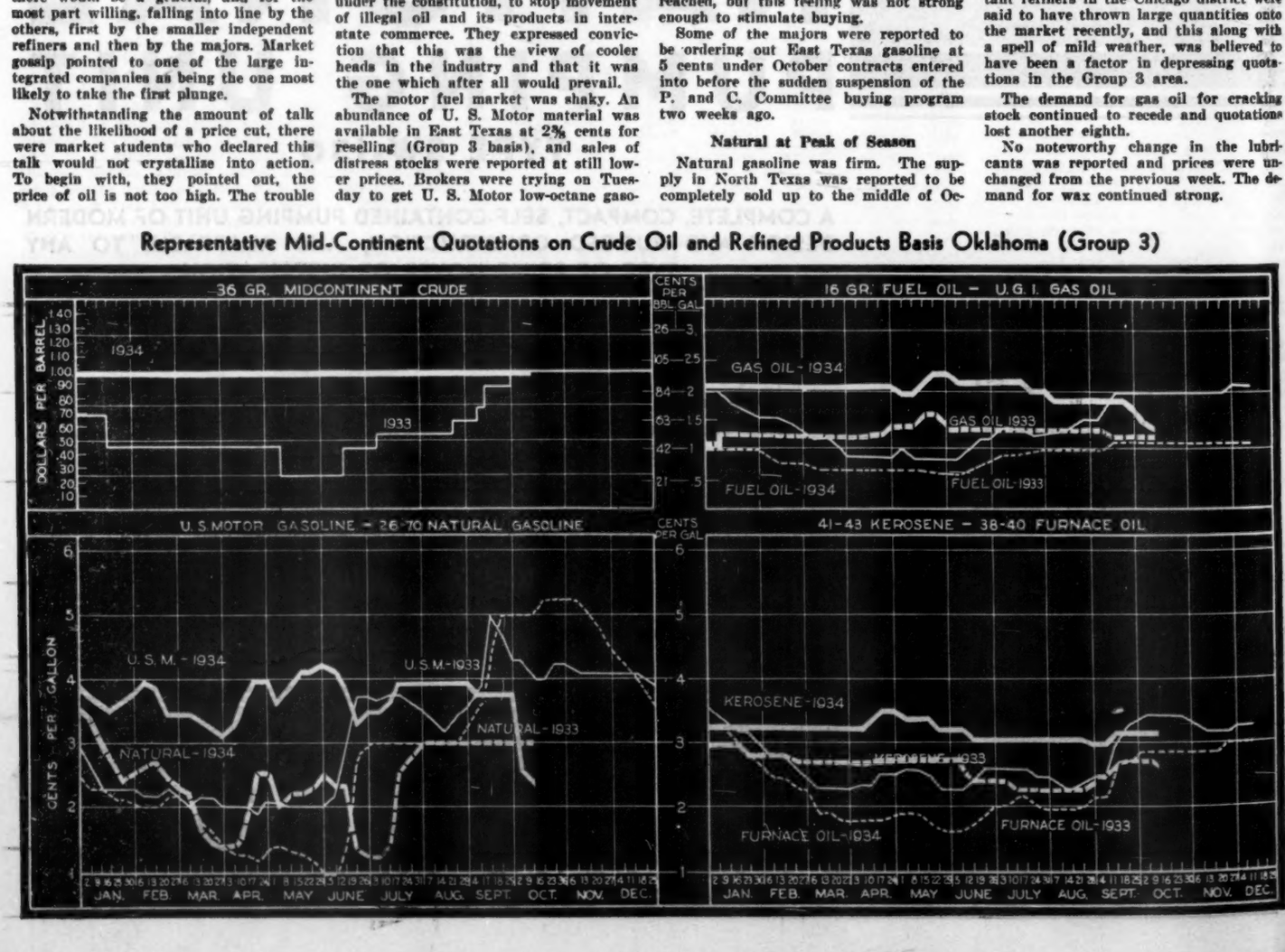
Gulf Coast.—Gasolines soft, but no trading. Fuels weak. Kerosene steady.

Pennsylvania.—Markets dull in all divisions, with no price changes.

California.—Pacific Coast Petroleum Agency taking drastic action against price cutters, with 100 stations involved. No price changes.

Chicago.—Gasoline nervous and weak. Kerosene and heating oils quiet. Naphthas slow.

Representative Mid-Continent Quotations on Crude Oil and Refined Products Basis Oklahoma (Group 3)



Eastern Market Continues Generally Unsettled; Purchasers Postpone Buying, Wait Outcome

By C. O. WILLSON
New York Bureau, The Oil and Gas Journal

NEW YORK, Oct. 8.—In line with conditions in other territories the eastern refined market at the start of a new week presented a generally unsettled appearance. Lower prices in gasoline and some of the other products are predicted by many in the trade and, as usual under these conditions, trading is dull, buyers postponing purchases as much as possible in expectation of being able to buy later at lower quotations.

In the case of fuels further price adjustments were announced the latter part of last week. As announced a week ago the price on Bunker C fuel oil at New York Harbor was reduced from $1.30 to $1.15 per barrel on October 1. Other price changes which became effective on that date as announced by the Standard Oil Co. of New Jersey were as follows:

Atlantic ports, including Philadelphia:
"Standard" Bunker B fuel oil reduced from $1.40 to $1.25 per barrel.
"Standard" 18 plus fuel oil reduced from $1.50 to $1.35 per barrel.
Prices at Charleston, S. C., Savannah and Jacksonville 5 cents under other Atlantic ports.

Gulf ports:
"Standard" fuel oil reduced from $1.15 to $1 per barrel.
"Standard" Bunker B fuel oil reduced from $1.25 to $1.10 per barrel.
"Standard" 18 plus fuel oil reduced from $1.35 to $1.20 per barrel.
The prices of above products at Cristobal and Balboa also reduced 15 cents.

On October 3 the following price reductions became effective:

Atlantic ports:
"Standard" Diesel fuel oil reduced from $1.95 to $1.89 per barrel.
No change in prices in Diesel fuel oil at Savannah, Miami, Portland, Providence, Philadelphia or Jacksonville.

Gulf ports:
"Standard" Diesel fuel oil reduced from $1.80 to $1.70 per barrel.
No change in price at Beaumont, Magpetco, Sabine or Texas City.

Mexico:
"Standard" bunker fuel oil reduced from $1.05 to $1 at Tampico and Vera Cruz only.

West Indies:
"Standard" bunker fuel oil reduced from $1.25 to $1.15 per barrel at San Juan and Ponce, P. R.; from $1.15 to 1.05 at St. Thomas, V. I.; from $2 to $1.90 at Bermuda; from $1.05 to $1 at Curacao, D. W. I., Caripito, Venezuela, Aruba, D. W. I., and Trinidad, D. W. I.; from $1.45 to $1.35 at Havana, Cuba; from $1.37 to $1.35 at Cienfuegos and Nuevitas, Cuba, and from $1.25 to $1.15 at Kingston, Jamaica.

No change in price at Maracaibo, Venezuela.

These schedules show that the reductions in fuel prices were general at ports in the United States, Mexico, Dutch West Indies and many South American points. So far as known these reductions were generally accepted by other major companies selling fuel oils at these points competitive with the Standard of New Jersey and its subsidiaries.

In New York City, the subsidiary of the Standard company made important reductions on No. 6 fuel oil. This product has been quoted at a spot price of $1.30 per barrel and in contracts a top price of $1.60 was provided. This has been reduced in tank car sales to a current price of $1.15 with a top of $1.35 on contracts. The basis of tank wagon deliveries also has been revised downward with a lower charge for delivery. The new price is $1.50 delivered with a top contract price of $1.71½.

May Stimulate Buying

Sellers are hopeful that these price adjustments will stimulate buying and result in the closing of contracts as they expire over the remainder of the year. There has been considerable opposition to the prices established last spring after a steady advance over a period of more than two years. The objections increased when the provisions of the petroleum code forbidding flat price agreements became known to the buyers. This was later changed to provide top prices. As in the case of the domestic buyers of furnace oils, these top price provisions have been interpreted in the marine trade as the probable quotations which the buyers will be compelled to pay before the expiration of the agreements and for that reason they have been reluctant to sign new contracts. The same situation has prevailed in the sale of the heavier fuels to industrial consumers and operators of large buildings using the oil as fuel. There have been numerous threats of returning to coal from oils among all classes of buyers and some shifting has actually taken place.

It remains to be seen what effect the new prices will have in stimulating trading. Actual consumption of fuels in this territory is not as heavy as it was a year ago, reflecting business conditions, and there are greater supplies available at this time. However, the fuel situation including the overhead distillates and gas oils is not as top heavy as is gasoline and any substantial improvement in demand or curtailment of supply would quickly result in a strong market for these products. The new prices for distillates and gas oils explained in these columns last week are still in effect.

Gasoline Weak

The gasoline market presents a generally weak appearance regardless of the angle from which it is viewed. At this writing, however, the posted refinery prices at New York for the four grades ranging from 5¾ cents for low octane to 6½ cents for the branded grades containing ethyl fluid are unchanged. Meanwhile, additional reductions became effective in tank wagon and service station prices to meet local conditions. In some sections the points with subnormal prices exceed the places with normal prices. Metropolitan New York is about the only important consuming point in New York State where tank wagon and service station prices have not been reduced in recent weeks and in most of the larger cities of New England prices are below normal. The natural conclusion is that this situation will be remedied with a general cut as has been done in other sections of the country. This in turn will mean lower prices in tank car and small barge shipments at refineries.

Gossip in the trade indicates a demoralized condition in tank wagon and service station markets. Numerous charges are being made as to practices in violation of the code and so far as known no attempt is being made to investigate these conditions. It is claimed that secret rebating and other forms of price cutting are common. One company is reported to have adopted a policy of meeting any of these secret prices with quotations which are posted in line with the code requirements. Actual consumption is holding up as well as expected and probably is ahead of last year so that the market trouble is coming from an effort to force excess production on the market rather than a decrease in demand.

The export gasoline market which gave some indications of improvement last month is also inactive again. Inquiries have dropped off, with European buyers apparently waiting for a serious break in the American market. Rumanian quotations continue to be above prices generally quoted by sellers in this country.

Several sellers in this country are quoting the 64-66 375 endpoint grade at 5 cents basis the Gulf but other prices range down to 4⅝ cents. Kerosene export prices are one-eighth cent lower at the Gulf reflecting slowness in the domestic market as well as a lack of inquiries from foreign buyers.

Steam Refined Stock Weak

Price changes in steam refined stocks for export and in the domestic market were downward. The 600 S.R. unfiltered grade in barrels for export (Pennsylvania Grade) dropped to 17½ to 18 cents with 650 unfiltered at 18½ to 19 cents. There was a slow demand for 600 flash at 20 to 20½ cents. Bright stocks (Pennsylvania Grade in barrels for export) was quoted at 26 to 27 cents.

The Pennsylvania and western neutrals are stronger than the stocks with a fair demand for winter compounding. The 200-3 color for export in barrels (Pennsylvania Grade) continued to be quoted at 34 to 35 cents. The demand for crude scale wax which was active in September has dropped off with the 124-126 crude scale material quoted for domestic movement at 3 to 3⅛ cents.

CHECK ON GASOLINE SALES

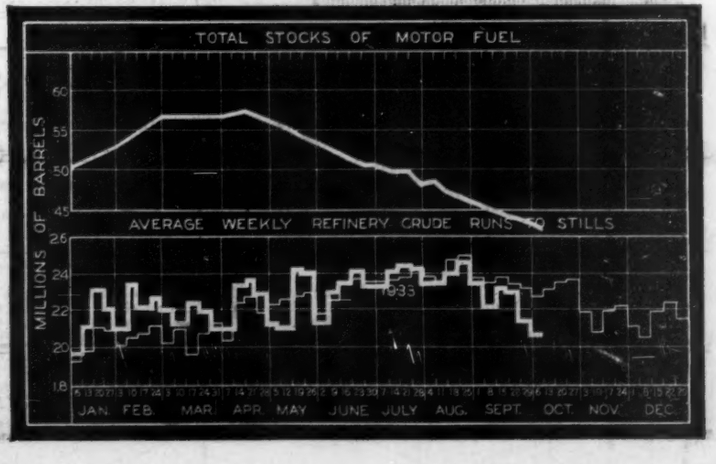
TORONTO, Ontario, Oct. 6.—Hon. T. B. McQuesten, minister of highways, has announced that inspectors will make a systematic check of gasoline sales throughout the province. It is believed 25 per cent of the gasoline tax revenue is being lost. Efforts will be made to prevent vendors selling without licenses, and people without proper facilities for selling gasoline will be refused licenses.

American Petroleum Institute Weekly Refinery Statistics

Week Ending October 6, 1934

	Capacity reporting per cent	Daily crude runs (bbls.)	Finished motor fuel (bbls.)	Gas oil and fuel oil (bbls.)
East Coast	100.0	428,000	13,297,000	14,507,000
Appalachian	93.3	88,000	1,517,000	1,669,000
Indiana, Illinois, Kentucky	94.6	280,000	6,464,000	5,016,000
Oklahoma, Kansas, Missouri	83.7	202,000	3,933,000	3,691,000
Inland Texas	47.6	73,000	891,000	1,440,000
Texas Gulf	97.5	443,000	3,692,000	10,906,000
Louisiana Gulf	96.4	116,000	1,333,000	3,023,000
North Louisiana and Arkansas	83.7	43,000	216,000	595,000
Rocky Mountain	66.7	27,000	483,000	537,000
California	96.9	384,000	11,534,000	74,145,000
Total United States	89.7	2,084,000	43,360,000	115,529,000

Note: Finished motor stocks shown in graph and in table include those at refineries, at bulk terminals and in pipe lines, but do not include 5,000,000 to 7,000,000 bbls. of unfinished gasoline which could be reprocessed quickly.



REFINERY AND CRUDE PRICES

Quotations on refined products are for interstate or export movement except as otherwise noted

The following quotations are exclusive of the Federal excise taxes of 1 cent a gallon on gasoline and 4 cents on lubricating oils:

Refinery Gasolines

OKLAHOMA (Group 3)—	Oct. 9		Oct. 2	
U. S. Motor grades:				
Below 63 octane	.02½	.03¼	.02⅝	.03⅜
63-70 octane	.03⅜	.04	.04⅛	.04½
60-62 400 grades:				
Below 63 octane	.02⅝	.02⅞	.02¾	.03½
63-70 octane	.04	.04¼	.04⅛	.04½
64-66 375	.03½	.03¾	.03¾	.04
68-70 360	.03⅜	.03⅞	.03⅞	.04
NORTH TEXAS—				
U. S. Motor grades:				
Below 63 octane	.03	.03¼	.03½	.03⅜
63-70 octane	.04⅛	.04½	.04⅛	.04½
60-62 400	.03¼	.03½	.03⅜	.03½
64-66 375	.03⅜	.03⅞	.03¾	.04
NORTH LOUISIANA (Ark., N. La. & Miss. del.)—				
U. S. Motor grades:				
Below 63 octane	.03½	.03¾	.04	
63-70 octane	.04¾	.05	.05	
60-62 400	.03¾	.04	.04	.04¼
68-70 360	.03⅞	.04¼	.04⅛	.04½
ARKANSAS (Ark., N. La. & Miss. del.)—				
U. S. Motor grades:				
Below 63 octane	.03¾	.03⅞	.04	
63-70 octane	.04¾	.05	.05	
CHICAGO (based on Oklahoma Group 3)—				
U. S. Motor grades:				
Below 63 octane	.02¾	.03¼	.03⅜	.03¾
63-70 octane	.04⅝	.05	.04⅝	.04⅝
60-62 400	.02⅞	.03¼	.03½	.03⅞
64-66 375	.03½	.04	.04	.04¼
68-70 360	.04⅜	.04¼	.04¼	.04½
Aviation fighting grade	.05	.05⅛	.05	.05¼
PENNSYLVANIA (inland refineries)—				
58-60 U. S. Motor:				
Below 60 octane	.05⅜	.05⅝	.05⅜	.05⅝
60-64.9 octane	.06⅛	.06¼	.06⅛	.06¼
65-70 octane	.06½	.06⅝	.06½	.06⅝
68-70 350	.06⅝	.06½	.06⅝	.06½
CALIFORNIA (domestic movement)—				
54-58 U. S. Motor	.07	.08	.07	.08
58-60 400	.08	.09	.08	.09
EAST COAST—				
U. S. Motor, below 60 octane:				
*New York	.05¾		.05¾	
Baltimore	.05¾		.05¾	
U. S. Motor, 60-64 octane:				
*New York (Bayonne)	.06		.06	
Philadelphia	.06	.06¼	.06	.06¼
Boston	.04½	.05	.05	.05½
Baltimore	.06		.06	
Charleston, S. C.	.06	.06¼	.06	.06¼
U. S. Motor, 65 and above:				
*New York (Bayonne)	.06¼		.06¼	
Philadelphia	.06¼	.06½	.06¼	.06½
Boston	.05	.05¼	.05¼	.05½
Baltimore	.06¼	.06½	.06¼	.06½
Charleston, S. C.	.06½		.06¼	.06½

*All grades of gasoline one-fourth cent less for small barge shipments.

GULF COAST (domestic)—				
U. S. Motor:				
Below 60 octane	.04½	.04¾	.04¾	
60-64.9 octane	.04⅝	.05¼	.04¾	.05¼
65 octane and higher	.05¼		.05¼	

Naphthas

	Oct. 9		Oct. 2	
PENNSYLVANIA (inland refineries)—				
50-52 (blending)	.05¼	.05⅜	.05¼	.05⅜
52-54 450 (blending)	.05¼	.05⅜	.05¼	.05⅜
54-56 450 (blending)	.05¼	.05⅞	.05¼	.05⅞
CHICAGO (based on Oklahoma Group 3)—				
50-52 450 (blending)	.03½	.03¾	.03¾	.04
Cleaners' naphtha, 56-58 gr., 200 i.b.p.-320 e.p.	.06¾	.07	.06¾	.07
Lacquer diluent, 180 i.b.p.-250 e.p.	.07¾	.08	.07¾	.08
Lacquer diluent, 140 i.b.p.-200 e.p.	.08¾	.09	.08¾	.09
Rubber solvent, 68-70 gr., 100 i.b.p.-300 e.p.	.06¾	.07	.06¾	.07
Stoddard solvent, 300 i.b.p.-410 e.p., over 83° flash	.06¼	.06½	.06¼	.06½
Pet. thinner, 290-300 i.b.p.-415 e.p., over 83° flash	.06¼	.06½	.06¼	.06½
V.M.&P. naphtha, 56-58 gr., 190-200 i.b.p.-330 e.p.	.06¾	.07	.06¾	.07
Petroleum spirits	.05¾	.06	.05¾	.06

Natural Gasolines

OKLAHOMA (Group 3)—	Oct. 9		Oct. 2	
Grade 26-70	.03		.03	
Grade 18-55	.03½		.03½	
Low vapor pressure grades:				
14 lb. v.p. (max.)	.03¾		.03¾	
11 lb. v.p. (max.)	.04⅛	.04¼	.04⅛	.04¼
NORTH TEXAS—				
Grade 26-70	.03		.02¾	.03
Grade 18-55	.03½	.03⅝	.03⅜	.03⅝
Low vapor pressure grades:				
14 lb. v.p. (max.)	.03⅝	.03¾	.03⅝	.03¾
11 lb. v.p. (max.)	.04	.04¼	.04	.04¼
NORTH LOUISIANA (Ark., N. La. & Miss. del.)—				
Grade 26-70	.03⅜		.03⅜	
CALIFORNIA—				
75-85 375	.06½	.06¾	.06½	.06¾

Kerosenes

(All kerosenes water white)

OKLAHOMA (Group 3)—	Oct. 9		Oct. 2	
41-43	.03	.03⅛	.03	.03⅛
42-44	.03⅛	.03¼	.03⅛	.03¼
NORTH TEXAS—				
40-41	.02⅞	.03⅛	.02⅞	.03⅛
41-43	.03	.03¼	.03	.03¼
NORTH LOUISIANA (Ark., N. La. & Miss. del.)—				
41-43	.03⅜		.03⅜	
ARKANSAS (Ark., N. La. & Miss. del.)—				
41-43	.03⅜	.03½	.03⅜	.03½
PENNSYLVANIA (inland refineries)—				
45	.04½	.04⅝	.04½	.04⅝
46	.04⅝	.04¾	.04⅝	.04¾
47	.04¾	.04⅞	.04¾	.04⅞
CHICAGO (based on Oklahoma Group 3)—				
41-43	.03½	.03¼	.03	.03¼
42-44	.03¼	.03½	.03¼	.03½
CALIFORNIA (Pacific Coast consumption)—				
38-40 high burning test	.04¾	.05¼	.04¾	.05¼
NEW YORK (Bayonne, N. J.)—				
41-43	.05	.05¼	.05	.05¼
GULF COAST (domestic)—				
41-43	.04½	.04⅝	.04½	.04⅝

Petroleum Coke

(Prices per ton f.o.b. refineries in Chicago area)
(Refineries will absorb freight to 80 cents a ton)

	Oct. 9	Oct. 2
Still run	5.50	5.50
Direct from still	6.50	6.50
Egg, nut, pea	8.25	8.25
Lump	8.25	8.25

Furnace Oils and Tractor Fuels

(Zero cold test under 190° flash and good odor)

OKLAHOMA (Group 3)—	Oct. 9		Oct. 2	
32-36 straw	.02⅝	.02⅞	.02⅜	.02⅞
36-38 straw	.02⅞	.02⅝	.02⅝	.02⅞
38-40 straw	.02⅝	.02¾	.02¾	.02⅞
38-40 prime white	.02¾	.02⅞	.02⅞	.03
NORTH TEXAS—				
38-40 straw	.02⅝	.02¾	.02¾	.02⅞
NORTH LOUISIANA (Ark., N. La. & Miss. del.)—				
36-40 furnace oil	.02⅝	.02⅞	.02¾	.03
ARKANSAS (Ark., N. La. & Miss. del.)—				
32-36 furnace oil	.02⅝	.02⅞	.02¾	.02⅞
CHICAGO (based on Oklahoma Group 3)—				
32-36 straw	.02¾	.02⅞	.02⅞	.03
38-40 straw	.02¾	.02⅞	.02⅞	.03
38-40 prime white	.02⅞		.03	.03⅛
NEW YORK (Bayonne, N. J.)—				
36-40 (No. 1 grade)	.05	.05¼	.05	.05¼
32-36 (No. 2 grade)	.04½		.04½	
21 industrial (No. 4 grade)	.04½		.04½	

Gas Oil, Diesel Oil and Fuel Oil

(Gas oil per gallon; Diesel and fuel oils per barrel)

OKLAHOMA (Group 3)—	Oct. 9		Oct. 2	
32-36 gas oil cracking stocks	.01¼	.01½	.01⅜	.01⅝
U.G.I. gas oil	.01⅝	.01½	.01½	.01⅞
32-36, zero to 15 gas oil	.02½	.02¾	.02½	.02¾
28-30, No. 3 burner oil	.95	1.00	.95	1.00
26-30, zero to 10 fuel oil	.85	.95	.85	.95
24-26 fuel oil	.75	.80	.75	.80
20-22 fuel oil	.70	.72½	.70	.72½
Below 16 fuel oil	.60	.62½	.60	.62½
NORTH TEXAS—				
32-36 gas oil, industrial	.01¼	.01½	.01⅜	.01⅝
22-26 fuel oil	.67½	.70	.67½	.70
Below 20 fuel oil	.57½	.62½	.57½	.62½
NORTH LOUISIANA (Ark., N. La. & Miss. del.)—				
30-32 gas oil, zero	.02½	.02⅝	.02½	.02⅝
14-16 fuel oil	.70	.75	.70	.75
ARKANSAS (Ark., N. La. & Miss. del.)—				
30-32 gas oil, zero	.02½	.02⅝	.02½	.02⅝
32-36 gas oil	.02⅝	.02½	.02⅝	.02½
14-16 fuel oil	.70	.75	.70	.75
CHICAGO (based on Oklahoma Group 3)—				
32-36 gas oil, industrial	.01¾	.02	.01¾	.02
28-30 zero to 10, fuel oil	.95	1.00	.95	1.00
26-28 zero to 10, fuel oil	.85	.90	.85	.90
22-26 zero to 10, fuel oil	.75	.80	.75	.80
18-22 zero to 10, fuel oil	.62½	.65	.62½	.65
Below 18 fuel oil	.55	.60	.55	.60

Note: Fuel oils of more than 40 cold test generally 5 to 15 cents per barrel in all these areas.

PENNSYLVANIA (inland refineries)—				
36-40	.03¾	.03⅞	.03¾	.03⅞
CALIFORNIA—				
Los Angeles:				
30-34 gas oil per bbl.	1.10	1.26	1.10	1.26
27 plus Diesel	1.05	1.15	1.05	1.15
27 plus Diesel (bunkers)	1.13	1.20	1.13	1.20
12-16 (bunker at tidewater)	.82	.85	.82	.85
10-16 (cargo lots)	.66	.75	.66	.75
12-17 (tank cars)	.60	.80	.60	.80
San Joaquin Valley:				
10-18 (tank cars)	.55	.70	.55	.70
San Francisco:				
27 plus Diesel per bbl.	1.15	1.25	1.15	1.25
27 plus Diesel (bunkers)	1.19		1.19	
10-16 (bunkers)	.89		.89	
GULF COAST—				
28-30 gas oil	.03½	.03⅝	.03½	.03⅝
28-30 Diesel (bunkers)	1.80		1.80	
Bunker C (bulk cargoes)	.90	.95	.90	.95
Bunker C (bunkers)	1.00		1.00	
NEW YORK (Bayonne, N. J.)—				
27 plus gas oil	.04½		.04½	
28-30 Diesel (lighterage 6½ cents per bbl.)	1.89		1.95	
28-30 Diesel (tank cars)	.04¼		.04½	
*Bunker C (to ocean-going ships in N. Y. harbor)	1.15		1.15	

*Lighterage charge 5 cents per barrel additional.

Neutral Oils

(Vis. at 100° F. except Pennsylvania, and color N.P.A.)

OKLAHOMA (Group 3)—	Oct. 9		Oct. 2	
Zero to 10 Cold Test:				
150-3	.10		.10	
180-3	.11¼		.11¼	
180-4	.10⅝		.10⅝	
200-3	.11⅜		.11⅜	
200-4	.11¼		.11¼	
240-3	.13⅜		.13⅜	
240-4	.13¼		.13¼	
280-3	.14⅜		.14⅜	
280-4	.14		.14	
300-3½	.15¼		.15¼	
400-4	.17¼		.17¼	
100-2 paraffin oil	.05¾		.05¾	
15-30 Cold Test:				
200-3	.10⅜		.10⅜	
200-4	.10¼		.10¼	
240-3	.12⅜		.12⅜	
240-4	.12¼		.12¼	
280-3	.13⅜		.13⅜	
280-4	.13		.13	
GULF COAST—				
Pale Oils:				
200-3	.07½	.08	.07½	.08
300-3	.08	.08½	.08	.08½
500-3½	.09	.09½	.09	.09½
750-3½	.09½	.10	.09½	.10
1,200-3½	.10	.10½	.10	.10½
2,000-4	.10¼	.10⅝	.10¼	.10⅝
Red Oils:				
200-5-6	.07¼	.07½	.07¼	.07½
300-5-6	.07¾	.08	.07¾	.08
500-5-6	.08½	.09	.08½	.09
750	.09	.09½	.09	.09½
1,200-5-6	.09¾	.10	.09¾	.10
CALIFORNIA—				
Pale Oils:				
100-2½-3	.12½	.14½	.12½	.14½
200-2½-3	.12½	.14½	.12½	.14½
300-3-3½	.12½	.14½	.12½	.14½
350-3-4	.12½	.14½	.12½	.14½
400-3-4	.12½	.14½	.12½	.14½
450-3-4	.12½	.14½	.12½	.14½
550-3-4	.12½	.14½	.12½	.14½
600-3-4	.12½	.14½	.12½	.14½
Red Oils:				
200-4-5	.12½	.14½	.12½	.14½
300-5-6	.12½	.14½	.12½	.14½
350-5-6	.12½	.14½	.12½	.14½

400-5-6	.12½	.14½	.12½	.14½
450-5-6	.12½	.14½	.12½	.14½
500-5-6	.12½	.14½	.12½	.14½
600-5-6½	.12½	.14½	.12½	.14½
700-6½ plus	.12½	.14½	.12½	.14½
750-6½ plus	.12½	.14½	.12½	1.4½
900-6½ plus	.12½	.14½	.12½	.14½
PENNSYLVANIA—				
150 vis. at 70° F., 3 color, 400-405 flash:				
Zero pour test	.23	.23½	.23	.23½
10 pour test	.22	.22½	.22	.22½
15 pour test	.21½	.22	.21½	.22
25 pour test	.21	.21½	.21	.21½
180 vis. at 70° F., 3 color:				
25 pour test	.24½	.25	.24½	.25
200 vis. at 70° F., 3 color:				
Zero pour test	.29½	.30	.29½	.30
10 pour test	.28½	.29	.28½	.29
15 pour test	.28	.28½	.28	.28½
25 pour test	.27½	.28	.27½	.28

Bright and Steam Refined Stocks

OKLAHOMA (Group 3)—	Oct. 9		Oct. 2	
Bright Stocks:				
190-200 D	.20		.20	
150-160 D, 0-10	.17		.17	
150-160 D, 10-25	.16½		.16½	
150-160 25-40	.16		.16	
150-160 E	.16		.16	
Steam refined:				
630 light green (treated)	.13		.13	
600 light green (untreated)	.06	.08	.06	.08
600 dark green (untreated)	.04½	.07	.04½	.07
PENNSYLVANIA—				
Bright Stocks (Pennsylvania grade, No. 8 color, 145-50 at 210; 540-550 flash):				
10 pour test	.21½	.22	.21½	.22
15 pour test	.21	.21½	.21	.21½
20 pour test	.20½	.21	.20½	.21
25 pour test	.20	.20½	.20	.20½
Steam refined:				
600	.12½	.13	.12½	.13
650	.15	.15½	.15	.15½
600 Pennsylvania flash	.16	.16½	.16	.16½
630 flash	.20½	.21½	.20½	.21½
600 Warren E filtered	.16	.16½	.16	.16½

Wax and Petrolatum

(Prices per pound)

OKLAHOMA (Group 3)—	Oct. 9		Oct. 2	
124-126 white crude scale	.03½	.03⅝	.03½	.03⅝
PENNSYLVANIA—				
122-124	.0325		.0325	
124-126	.0325		.0325	
NEW YORK HARBOR—				
Wax (a.m.p.) in bags fully refined:				
120-122	.0420	.0430	.0420	.0430
123-125	.0440	.0460	.0440	.0460
125-127	.0445	.0470	.0445	.0470
130-132	.05	.0510	.05	.0510
133-135	.0545	.0570	.0545	.0570
135-137	.0570	.0595	.0570	.0595
124-126 crude scale	.03	.03⅛	.03⅛	.03¼
Petrolatum in barrels in carload lots:				
Dark green	.01⅞		.01⅞	
Amber	.02⅞	.03	.02⅞	.03
Extra amber	.03	.03⅛	.03	.03⅛
Lily white	.06⅝	.06¾	.06⅝	.06¾
Snow white	.07⅜	.07⅞	.07¾	.07⅞
Cream	.05⅝	.05¾	.05⅝	.05¾
CHICAGO (f.o.b. switching district)*—				
122-124 wax	.0490	.0500	.0490	.0500
125-127 wax	.0515	.0525	.0515	.0625
127-129 wax	.0530	.0540	.0530	.0540
130-132 wax	.0590	.0600	.0590	.0600
132-134 wax	.0615	.0625	.0615	.0625

*Cents per pound on carlot orders in burlap bags of 225 lbs. approx. Add 3° F. a.m.p.

Export Prices

GASOLINE

GULF COAST—	Oct. 9	Oct. 2
U. S. Motor	.04¼	.04¼
60-62 400	.04⅜	.04⅜
61-63 390	.04½	.04½
64-66 375	.04⅝	.04⅝
LOS ANGELES, CALIF.—		
U. S. Motor grades:		
53-55 octane	.04	.04¼
55-65 octane	.04¼	.04½
65-67 octane	.04½	.04¾
67-69 octane	.04¾	.05
Above 69 octane	.05	.05¼
58-60 400 endpoint	.04¾	.05½

KEROSENE

GULF COAST—				
41-43 prime white	.04	.04½	.04	.04⅛
41-43 water white	.04⅛	.04¼	.04⅛	.04¼
44 water white	.04¼	.04⅜	.04¼	.04⅜
LOS ANGELES, CALIF.—				
41-43 water white	.04¼	.04¾	.04¼	.04¾

LUBRICANTS

NEW YORK (f.a.s. in bbls.)—				
Cylinder Stocks:				
600 Warren E	.21½	.22	.22	.22½
600 S.R. unfiltered	.17½	.18	.18½	.19
650 S.R. unfiltered	.18½	.19	.20½	.21
600 flash S.R.	.20	.20½	.21½	.22
630 flash S.R.	.25½	.26	.25½	.26
Bright Stocks:				
8 color	.26	.27	.27	
6½ plus color, in dilution	.25	.26	.26	

NEUTRAL OILS

200-3 color	.34	.35	.34	.34½
150-3 color	.27	.28	.27	.28

PARAFFIN WAX (Fully Refined)

NEW YORK (prices per pound)—				
120-122 a.m.p.	.0405	.0425	.0405	.0425
123-125 a.m.p.	.0435	.0455	.0435	.0455
125-127 a.m.p.	.0440	.0465	.0440	.0465
128-130 a.m.p.	.04¾	.0490	.04¾	.0490
130-132 a.m.p.	.0495	.0505	.0495	.0505
133-135 a.m.p.	.0540	.0565	.0540	.0565
135-137 a.m.p.	.0565	.0590	.0565	.0590

Crude Oil Gravity Table

Degrees gravity—	1 Oklahoma and Kansas	2 North Texas, Central Texas and East Central Texas	3 North Louisiana and Arkansas	4 Gray County, Texas	5 Carson, Hutchinson and Moore Counties, Texas	6 Conroe, Texas	7 Salt Creek, Wyo.	8 Gulf Coast, Texas and Louisiana	9 Gulf Coast, Texas, and Louisiana	10 Cotton Valley, Louisiana
Below 20								$.82	$ 82	
20-20.9								.84	.84	
21-21.9								.86	.86	
22-22.9								.88	.88	
23-23.9								.90	.90	
24-24.9								.92	.92	
Below 25	*$.76									$.70
25-25.9	*.78							.94	.94	.72
26-26.9	*.80							.96	.96	.74
27-27.9	*.82							.98	.98	.76
28-28.9	*.84							1.00	1.00	.78
Below 29	.84	$.79	$.79				$.84			
29-29.9	.86	.81	.81				.86	1.02	1.02	.80
30-30.9	.88	.83	.83				.88	1.04	1.04	.82
31-31.9	.90	.85	.85				.90	1.06	1.05	.84
32-32.9	.92	.87	.87				.92	1.08	1.06	.86
33-33.9	.94	.89	.89				.94	1.10	1.07	.88
34-34.9	.96	.91	.91				.96	1.12	1.08	.90
Below 35				$.79	$.69					
35-35.9	.98	.93	.93	.81	.71	$1.09	.98	1.12	1.09	.92
36-36.9	1.00	.95	.95	.83	.73	1.11	1.00	1.12	1.10	.94
37-37.9	1.02	.97	.97	.85	.75	1.13	1.02	1.12	1.11	.96
38-38.9	1.04	.99	.99	.87	.77	1.15	1.04	1.12	1.12	.98
39-39.9	1.06	1.01	1.01	.89	.79	1.17	1.06	1.12	1.13	1.00
40 and over	1.08	1.03	1.03	.91	.81	1.19	1.08	1.12	1.14	1.02

Note—Effective June 1, 1934, Texas Co. purchases Texas Panhandle crude on a sweet crude and sour crude basis. Panhandle sweet crude is paid for on a basis of the Gray County prices posted above, and Panhandle sour crude is paid for on a basis of Carson and Hutchinson County prices posted above.

*The following companies purchasing crude oil in Kansas or Oklahoma, or both, begin their price schedule: Below 25°, 76 cents; 25-25.9°, 78 cents, with 2 cents added for each degree upward to 40 and over at $1.08; Carter Oil Co., Magnolia Petroleum Co., Pure Oil Co., Rock Island Refining Co., Shell Petroleum Corp., Sinclair Prairie Oil Marketing Co., Skelly Oil Co., and Wilcox Oil & Gas Co. All others begin their schedules at below 29°, 84 cents, excepting Philtex Oil Co., which begins with below 31° at 88 cents.

Column 1—Effective September 29, Texas Co. in Oklahoma; Stanolind Crude Oil Purchasing Co. in Kansas and Oklahoma; Anderson & Prichard, Inc., in Oklahoma; Bell Oil & Gas Co. in Oklahoma; Carter Oil Co. in Oklahoma and Kansas; Deep Rock Oil Co. in Oklahoma; Derby Oil Co. in Kansas; Globe Refining Co. in Oklahoma; Golden Rule Refining Co. in Kansas; Gypsy Oil Co. in Oklahoma and Kansas; Kanotex Refining Co. in Kansas; Magnolia Petroleum Co. in Oklahoma; Mid-Continent Petroleum Corp. in Oklahoma; National Refining Co. in Kansas and Oklahoma; Shell Petroleum Corp. in Kansas and Oklahoma; Sinclair Prairie Oil Marketing Co. in Kansas and Oklahoma; Texas Co. in Oklahoma; Tide Water Oil Co. in Oklahoma; Vickers Refining Co. in Kansas; Continental Oil Co. in Kansas and Oklahoma; Empire Pipe Line Co. in Oklahoma and Kansas; Philtex Oil Co. in Kansas and Oklahoma; Pure Oil Co. in Oklahoma; Skelly Oil Co. in Kansas. Effective September 29, by White Eagle Oil Corp. in Kansas; October 1 by Barnsdall Refineries, Inc., in Oklahoma.

Column 2.—Effective September 29, by Texas Co., Stanolind Crude Oil Purchasing Co., Humble Oil & Refining Co., Sinclair Prairie Oil Marketing Co., Gulf Pipe Line Co., Magnolia Petroleum Co., Bell Oil & Gas Co., Continental Oil Co. Effective September 29, in the Van Pool, Van Zandt County, Pure Oil Co. posted below 29°, 84 cents, with 2 cents added for each degree up to 40 and over at $1.08.

Column 3.—Effective September 29, by Texas Co., Magnolia Petroleum Co., Gulf Refining Co. Effective December 22, Stanolind Oil & Gas Co. in Pine Island, Louisiana, and Marion County, Texas, posted below 29°, 79 cents, with 2 cents added for each degree up to 40 and over at $1.03. Effective March 17, 1934, by Standard Oil Co. of Louisiana and Louisiana Oil Refining Co. Starting with below 25°, 71 cents, adding 2 cents for each degree upward to 40 and over at $1.03.

Column 4.—Effective September 29, by Texas Co., Humble Oil & Refining Co., Magnolia Petroleum Co., Sinclair Prairie Oil Marketing Co., and H. F. Wilcox Oil & Gas Co. On same day Philtex Oil Co. posted below 31°, 71 cents, with 2 cents added for each degree up to 40 and over at 91 cents. Effective June 1, 1934, Texas Co. (see note above).

Column 5.—Effective September 29, by Texas Co., Humble Oil & Refining Co., Gulf Pipe Line Co., Magnolia Petroleum Co., Wilcox Oil & Gas Co., Continental Oil Co. On same day, Philtex Oil Co. posted below 31°, 61 cents, with 2 cents added for each degree upward to 40 and over at 81 cents. Effective June 1, 1934, Texas Co. (see note above).

Column 6.—Effective September 29, by Humble Oil & Refining Co. and Tide Water Oil Co. and on September 30, by Texas Co., which on September 29 had posted a schedule of $1.07 to $1.12 with a 1-cent spread on each degree.

Column 7.—Effective September 29, by Stanolind Oil & Gas Co.

Column 8.—Effective September 29, by Humble Oil & Refining Co., Gulf Pipe Line Co., Shell Petroleum Corp., Pure Oil Co., Sinclair Prairie Oil Marketing Co. On October 2, Magnolia Petroleum Co. posted Lockport, Louisiana; 29-29.9°, 84 cents with 2 cents added for each degree upward to 34 and over at $1.12, and in Cameron Meadows and Iowa, Louisiana; below 30°, 72 cents with 2 cents added for each degree up to 34 and over at $1.02. These prices were 2 cents higher on each degree than Magnolia prices posted on September 29. Effective September 29, Shell Petroleum Corp. posted in Iowa, Louisiana, district: Below 20°, 70 cents, with 2 cents added for each degree upward to 34° and over at $1; and in Black Bayou and White Castle, Louisiana: Below 20°, 80 cents, with 2 cents added for each degree upward to 34° and over at $1.16.

Column 9.—Effective September 30, Texas Co. (On September 29, Texas Co. had posted a schedule of 2 cents on each degree, but changed it on September 30).

Column 10.—Effective September 29, by Louisiana Oil Refining Co.

(California Crude Oil Prices on Page 41)

Crude Oil Prices

Oklahoma, Kansas, North Central and East Central Texas

East Texas	$1.00
Stratman, Kans. (Sept. 29, 1933)	1.03
Corsicana (heavy) June 17, 1933)*	.80
Other fields	(See gravity table)

Note—In East Texas, effective September 29, 1933, by Texas Co., Stanolind Crude Oil Purchasing Co., Humble Oil & Refining Co., Shell Petroleum Corp., Gulf Pipe Line Co., Tide Water Oil Co., Sinclair Prairie Oil Marketing Co., Magnolia Petroleum Co., Sun Oil Co., Panola Pipe Line Co. and Empire Oil & Refining Co.

*Magnolia Petroleum Co.

West Texas

Crane, Upton, Crockett, Howard, Glasscock, Mitchell (Sept. 29, 1933)	$.70
Ector, Winkler and Pecos Counties and Lea County, New Mexico (Sept. 29, 1933)	.75
Pecos County, Yates shallow Pool (Sept. 29, 1933)*	.65
Jones and Fisher Counties*	See gravity table.

Note—Effective September 29, 1933, by Humble Oil & Refining Co., Texas Co., Gulf Pipe Line Co., Shell Petroleum Corp., Magnolia Petroleum Co., and by Stanolind Oil & Gas Co. in Winkler County, Texas.

*Shell Petroleum Corp.

Gulf Coast

Grade A and Grade B specifications discontinued by leading buyers. (See gravity table)

Tomball (see note)*	$1.15
Livingston (Sept. 29, 1933)†	1.00
Cleveland (Jan. 11, 1934)	1.00
Greta (Sept. 29, 1933)	.85
Refugio, light	(See gravity table)
Refugio, heavy (Sept. 29, 1933)‡	.85
Markham and High Island	(See Gulf Coast gravity table)
Conroe	(See Conroe gravity table)

Note—Tomball, effective September 29, by Humble Oil & Refining Co. and October 2, by Magnolia Petroleum Co., and November 10, by Stanolind Oil & Gas Co.

*Greta posted by Texas Co. †Shell Petroleum Corp. ‡Refugio heavy, by Humble Oil & Refining Co. Cleveland (Liberty County), posted by Magnolia Petroleum Co.

South Central and Southwest Texas

(See note below table)

Darst Creek	$.97
Mirando	.80
Luling (Sept. 29, 1933)	.75
Pettus	1.05
Salt Flat	.87
Lytton Springs (Sept. 29, 1933)	.95
Duval County (Sept. 29, 1933)	.80
Saxet	.85

Note—Effective on September 29 by Humble Oil & Refining Co., in Darst Creek, Mirando, Pettus, Salt Flat and Saxet. Effective September 29 in Darst Creek by Gulf Pipe Line Co. and Texas Co. Effective October 2 by Magnolia Petroleum Co. Effective in Pettus and Salt Flat on September 29 by Humble Oil & Refining Co. and Gulf Pipe Line Co. Luling and Lytton Springs by Magnolia Petroleum Co. Duval County by Texas Co. Saxet, effective September 29, by Humble Oil & Refining Co. and Texas Co.

(Continued on Page 41)

TANK WAGON MARKETS

Quotations for gasoline and kerosene in United States, as furnished by the larger marketing concerns, include taxes

October 9, 1934

Taxes

The gasoline quotations given in the following tables include the 1 cent Federal tax, as well as state, county and city taxes. The gasoline quoted is the regular or standard grade. In most marketing areas a third grade and a premium grade are also available.

Discounts

Under the standard form of commercial consumer contract which went into effect March 1, 1934, save in California, Oregon, Washington, Arizona and Nevada, a discount of 1 cent a gallon off tank wagon, or 3 cents a gallon off retail prices, is permitted for purchases running between 5,000 and 10,000 gallons a month, and 2 cents a gallon off tank wagon, or 4 cents a gallon off retail prices, for purchases in lots of more than 10,000 gallons a month. The minimum delivery is 25 gallons.

Rocky Mountain District

CONTINENTAL OIL CO.

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax	tank wagon
Denver, Colo...	18.0	20.0	5.0	12.5
Pueblo	18.0	20.0	5.0	11.0
Grand Junction	20.5	22.5	5.0	15.0
Casper, Wyo. ..	18.0	20.0	5.0	11.5
Cheyenne	18.0	20.0	5.0	13.0
Butte, Mont. ..	21.0	23.0	5.0	17.5
Billings	21.0	23.0	6.0	16.5
Helena	23.0	25.0	6.0	17.5
Great Falls ...	21.5	23.5	6.0	17.5
Salt Lake, Utah	19.0	21.0	5.0	16.0
Boise, Idaho ..	22.5	24.5	6.0	18.0
Twin Falls	22.5	24.5	6.0	18.0
Albu'que, N. M.	18.0	20.0	*7.0	13.0

*One-cent city tax.

Effective March 1, 1934, discount to dealers with or without contract throughout Continental territory: Undivided dealer discount off service station price, 4 cents; divided dealer accounts, 3½ cents.

Standard Oil Co. (Indiana)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax	tank wagon
Chicago	14.8	14.8	4.0	8.0
Decatur, Ill. ..	14.7	16.7	4.0	10.2
E. St. Louis ...	14.4	16.4	4.0	9.5
Joliet	14.8	16.8	4.0	10.2
Peoria	14.7	16.7	4.0	10.2
Quincy	14.6	16.6	4.0	10.0
Davenport, Ia..	14.5	16.5	4.0	10.1
Des Moines ...	14.4	16.4	4.0	10.1
Mason City ...	14.7	16.7	4.0	10.1
Sioux City	14.6	16.6	4.0	9.7
Duluth, Minn. .	15.3	17.3	4.0	10.4
Mankato	15.0	17.0	4.0	9.5
Minneapolis ...	16.0	17.0	4.0	10.4
LaCrosse, Wis..	16.0	18.0	4.0	10.8
Green Bay	16.2	18.2	5.0	10.2
Milwaukee	13.5	14.4	5.0	9.0
Madison	16.0	18.0	5.0	9.9
Detroit, Mich .	16.0	18.0	4.0	10.5
Grand Rapids .	15.7	17.7	4.0	10.2
Saginaw	16.0	18.0	4.0	10.5
Evansville, Ind.	16.3	18.3	5.0	10.0
Indianapolis. ..	16.4	18.4	5.0	10.2
South Bend ...	16.7	18.7	5.0	9.0
Fargo, N. Dak.	16.0	18.0	4.0	11.4
Huron, S. Dak.	16.5	18.5	5.0	11.4
Sioux Falls ...	15.9	17.9	5.0	10.9
Kans. C., Mo.*	13.9	15.9	4.0	7.5
Springfield ...	13.6	15.5	3.5	8.8
St. Louis	13.7	15.7	3.5	8.7
St. Joseph* ...	13.9	15.9	4.0	7.8
Wichita, Kans..	13.5	15.5	4.0	7.5
Bartlesville, Ok.	16.0	18.5	5.0	8.5

*State tax 2 cents, 1-cent city tax and 1-cent Federal tax.

Discounts to dealers, effective March 1, 1934: Undivided accounts, 4 cents a gallon on Red Crown Ethyl and Standard Red Crown, divided accounts, 3½ cents a gallon on Red Crown Ethyl and Standard Red Crown.

Stanolex Furnace Oil in Chicago

Effective Sept. 6, 1934, f.o.b. Chicago tank wagon prices: No. 1 (36-40 lt. stw. zero), less than 100 gallons, 8¼ cents; 100-149 gallons, 7¼ cents; 150 gallons or more, 6¾ cents; No. 2 (30-34, stw. zero), less than 150 gallons, 7½ cents; No. 3 (23-26, zero), less than 150 gallons, 7 cents; No. 4 (12-16, zero), less than 400 gallons, 6½ cents; viscosity of No. 4, 90-115 at 100° F.; No. 5, less than 400 gallons, 5¾ cents. For deliveries of more than stated quantities of Nos. 2, 3, 4 and 5, deduct 1 cent.

Naphtha

	Tank wagon*
Oleum spirits	16.9
V.M.&P. naphtha	18.0
Cleaners' naphtha	18.0
Stanisol	18.0

*Prices include 3-cent Illinois tax, but not 1-cent Federal tax.

Prices f.o.b. Chicago, September 13, 1933. Each of above prices subject to discount of 1 cent per gallon for 150-gallon lots if covered by contracts.

Southern District

STANDARD OIL CO. (KENTUCKY)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax	tank wagon
Atlanta, Ga. ..	19.0	22.0	7.0	14.5
Augusta	20.0	22.0	7.0	14.5
Macon	20.0	22.0	7.0	14.5
Savannah	19.0	21.0	7.0	14.0
Birm'ham, Ala..	18.0	20.0	8.0	11.0
Mobile	20.5	22.5	8.0	12.0
Montgomery ..	21.5	23.5	8.0	15.0
Jackson, Miss..	18.5	20.5	8.0	13.0
Vicksburg	18.0	20.0	7.0	12.0
Jack'ville, Fla..	17.0	20.0	8.0	11.5
Miami	18.0	20.0	8.0	13.5
Pensacola	17.0	19.0	8.0	13.5
Tampa	18.0	20.0	8.0	13.5
Lexington, Ky..	18.5	20.5	6.0	11.5
Covington	16.0	17.0	6.0	11.5
Louisville	18.0	20.0	6.0	11.0
Paducah	18.0	20.0	6.0	11.0

In addition to the state tax of 4 cents on gasoline, Montgomery has city and county tax of 2 cents on gasoline and one-half cent on kerosene. Kerosene prices in Georgia and Mississippi include 1 cent state tax; in Alabama, an inspection fee of one-half cent on kerosene and one-fortieth cent on gasoline; in Florida an inspection fee of one-eighth cent on kerosene and gasoline. To Pensacola, Mobile and Birmingham state taxes on gasoline add 1 cent city tax.

Southwestern District

MAGNOLIA PETROLEUM CO.

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax	tank wagon
Dallas, Tex. ...	10.0	12.0	5.0	6.0
Fort Worth ...	12.0	14.0	5.0	7.0
Houston	15.0	17.0	5.0	8.5
San Antonio ..	16.0	18.0	6.0	8.5
El Paso	18.5	20.5	5.0	11.0
Muskogee, Ok...	16.0	18.0	5.0	6.9
Okla. City	15.0	17.0	5.0	8.5
Tulsa	16.0	18.0	5.0	7.5
Ft. Smith, Ark.	16.5	18.5	5.0	8.0
Little Rock ...	19.0	21.0	7.5	9.0
Texarkana	17.0	19.0	5.0	8.0

Atlantic Coast District

STANDARD OIL CO. OF NEW JERSEY

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax	tank wagon
Atl'tic City, N.J.	19.0	18.5	4.0	10.0
Newark	18.3	17.8	4.0	9.5
Annapolis, Md..	19.6	19.1	5.0	10.0
Baltimore	19.1	18.6	5.0	9.5
Cumberland ...	20.6	20.1	5.0	12.7
Wash'g'n, D. C.	17.3	16.8	3.0	11.5
Danville, Va. ..	21.7	21.2	6.0	12.9
Norfolk	20.2	19.7	6.0	11.3
Petersburg	20.5	20.0	6.0	11.4
Richmond	20.5	20.0	6.0	11.7
Roanoke	21.8	21.3	6.0	12.9
Charle's, W. Va.	20.0	19.5	5.0	12.6
Parkersburg	19.3	18.8	5.0	11.2
Wheeling	20.0	19.0	5.0	12.3
Charlotte, N. C.	23.4	22.0	7.0	13.5
Hickory	23.7	21.0	7.0	13.7
Mt. Airy	23.7	21.2	7.0	13.8
Raleigh	23.3	22.7	7.0	13.3
Salisbury	23.5	17.0	7.0	13.6
Charleston, S.C.	21.3	20.7	7.0	11.3
Columbia	23.0	22.0	7.0	13.2
Spartanburg ..	23.4	23.5	7.0	13.5

Price basis to dealers: Divided dealers at dealer price, which is 2½ cents above tank car; undivided dealers at regular price less one-half cent. Discount for kerosene, 1 cent off tank wagon price for 25 gallons or more under contract (contract not necessary in Baltimore) except in New Jersey, where no discount is given.

Nebraska

STANDARD OIL CO. OF NEBRASKA

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax	tank wagon
Omaha	17.0	17.4	5.0	10.0
McCook	17.7	18.7	5.0	10.7
Norfolk	17.4	17.9	5.0	10.4
North Platte ..	17.8	18.3	5.0	10.0
Scottsbluff	18.3	18.3	5.0	9.0

Note—Discount to dealers, including any rentals under lease and agency agreements: Undivided accounts, Standard Red Crown and Red Crown Ethyl Gasoline 4 cents. Reliance (third brand) 3 cents, under service station price. Divided accounts, Standard Red Crown Ethyl Gasoline 3½ cents. Reliance (third brand) 2½ cents under service station price. Discounts to consumers covered only by form CD-1, official commercial consumer contract.

Central South District

STANDARD OIL CO. OF LOUISIANA

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax	tank wagon
N. Orleans, La.	20.8	20.0	*7.0	†12.0
Baton Rouge ..	20.2	19.7	6.0	†12.0
Alexandria	21.1	20.5	*7.0	†10.0
Lafayette	21.3	20.8	*7.0	†12.0
Lake Charles ..	21.3	20.7	*7.0	†12.0
Shreveport	19.0	21.0	6.0	†10.0
Knoxville, Tenn.	24.7	23.5	8.0	13.5
Memphis	23.1	22.5	8.0	10.5
Chattanooga ..	24.5	19.5	8.0	11.0
Nashville	24.0	22.5	8.0	12.0
Bristol	24.5	21.0	8.0	14.0

*Includes city tax of 1 cent. †Louisiana kerosene prices include 1-cent state tax.

Price bases to dealers: Divided dealers at dealer price, which is 2½ cents above tank car; undivided dealers at dealer price less one-half cent.

Pacific Coast Territory

STANDARD OIL CO. OF CALIFORNIA*

	Gasoline			Kero.
	Tank wagon†	Posted retail	Incl'ds tax	tank wagon
San Francisco .	16.5	18.5	4.0	13.5
Los Angeles ..	15.5	17.5	4.0	12.5
Fresno, Calif. ..	17.0	19.0	4.0	14.0
Phoenix, Ariz..	20.0	22.0	6.0	‡16.0
Reno, Nev.	16.5	18.5	5.0	15.5
Portland, Ore. .	19.0	21.0	6.0	13.5
Seattle, Wash..	19.0	21.0	6.0	13.5
Tacoma	19.0	21.0	6.0	13.5
Spokane	22.0	24.0	6.0	18.0

*Retail prices posted by Standard Stations, Inc., a subsidiary.

†Prices are at company's plant or depots, as company does not operate stations. A 4-cent per gallon discount is given dealers and customers taking tank wagon lots except in Phoenix where the discount is 1 cent.

‡Includes 5-cent state tax.

Pennsylvania, Delaware and Part of New England

ATLANTIC REFINING CO.

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax	tank wagon
Philadelphia, Pa.	15.5	17.5	4.0	10.0
Pittsburgh	16.0	18.0	4.0	10.0
Allentown	15.5	17.5	4.0	10.0
Erie	16.0	18.0	4.0	9.0
Scranton	16.0	18.0	4.0	10.0
Altoona	16.0	18.0	4.0	10.0
Dover, Del. ...	16.0	18.0	4.0	10.0
Wilmington	15.5	17.5	4.0	9.0
Springf'd, Mass.	15.0	17.0	4.0	8.25
Worcester	13.0	13.0	4.0	8.5
Hartford, Conn.	14.0	16.0	3.0	7.5
New Haven ...	14.0	16.0	3.0	7.5
Providence, R.I.	13.0	14.0	3.0	8.0

Note—Tank wagon prices are those applicable to consumers purchasing lots of 100 or more gallons in one delivery.

New York and Part of New England

STANDARD OIL CO. OF NEW YORK

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax	tank wagon
Albany, N. Y. .	15.0	16.0	4.0	9.0
Met. New York	16.5	17.5	4.0	8.5
Buffalo	16.5	17.5	4.0	9.0
Rochester	16.5	17.5	4.0	9.25
Syracuse	16.5	17.5	4.0	9.25
Boston, Mass. .	12.0	13.0	4.0	8.5
Portland, Me. .	17.5	18.5	5.0	8.75
Manch't'r, N.H.	16.5	17.5	5.0	8.75
Burlington, Vt.	19.0	20.0	5.0	9.75

Commercial consumers allowed 2 cents discount below service station prices in accordance with CD-1 of oil industry's code.

Ohio

STANDARD OIL CO. OF OHIO

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax	tank wagon
Ohio points ...	15.5	17.5	5.0	*12.5

*Includes state tax of 1 cent, effective July 22.

Canada*

IMPERIAL OIL, LTD.
Imperial 3-Star Gasoline

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax	tank wagon
Hamilton, Ont..	†21.0	23.5	6.0	17.5
Toronto, Ont...	†21.0	23.5	6.0	17.5
Brandon, Man..	20.3	22.3	7.0	21.3
Winnipeg, Man.	20.7	21.7	7.0	20.3
Regina, Sask..	29.0	33.0	6.0	21.0
Saskatoon, Sask.	31.8	34.8	6.0	24.1
Edmonton, Alta.	31.2	34.2	6.0	22.1
Calgary, Alta..	28.5	31.5	6.0	21.6
Vancouver, B.C.	†28.0	30.0	7.0	24.6
Montreal, Que..	24.0	27.0	6.0	17.0
St. John, N.B..	26.0	30.0	8.0	21.6
Halifax, N.S. ..	26.0	30.0	8.0	21.0

Imperial gallon used in Canada. †Governed by service station price.

Maritime provinces, all deals 4 cents off service station price. All other provinces open dealers 2.5 cents off service station price and 1 cent additional to 100 per cent accounts.

Retail Price Changes

Regular-Grade Gasoline and Kerosene

Atlantic Refining Co., October 2, reduced tank wagon gasoline 2 cents and station gasoline 4 cents in Worcester. September 28, reduced tank wagon kerosene one-half cent in Providence. October 2, reduced tank wagon kerosene one-quarter cent in Springfield.

Continental Oil Co., July 27, reduced tank wagon and station gasoline 1½ cents in Billings. October 3, advanced tank wagon and station gasoline 3 cents in Salt Lake City.

Standard Oil Co. of New Jersey, September 21, reduced station gasoline 2.2 cents in Hickory. September 27, reduced station gasoline 1 cent in Salisbury.

Standard Oil Co. of Louisiana, September 20, reduced station gasoline one-half cent in Chattanooga; September 22, reduced it one-half cent further; September 23, reduced it one-half cent further; September 25, reduced it one-half cent further; September 26, reduced it one-half cent further; September 28, reduced it one-half cent further. September 25, reduced station gasoline 1 cent in Shreveport. September 28, reduced station gasoline .6 cent in Bristol.

Standard Oil Co. (Indiana), October 4, reduced station gasoline 1 cent in Chicago; October 6, reduced it 1½ cents further.

Magnolia Petroleum Co., October 1, advanced tank wagon and station gasoline 3 cents in Oklahoma City. October 5, reduced tank wagon and station gasoline 2 cents in Fort Worth. October 6, reduced tank wagon and station gasoline 4 cents in Dallas.

FEDERAL TENDER COMMITTEE

FORT WORTH, Tex., Oct. 9.—Members of the Texas Petroleum Council met with 40 pipe line company representatives in Tyler this morning to draft a plan to place before Federal authorities in that city this afternoon. This system will carry regulations pertaining to all oil and refined products offered for interstate shipments and proposes the Government set up a tender committee similar to that of the Texas Railroad Commission to enforce Section 9(c) dealing with interstate movement of oil. The plan will have to be submitted to authorities at Washington before being placed in force but is expected to be approved by Secretary Ickes.

SALT WATER IN FITTS

Magnolia Petroleum Co.'s No. 1 Craddock, SE cor. Section 24-2-6, Fitts Pool, Pontotoc County, Oklahoma, had first Wilcox sand at 4,521-28 feet and 2,700 feet of salt water rose in the hole. It is in the north edge of the field.

OIL COMPANY MOVES

The British American Oil Co. is now located on the fourteenth floor of the Philtower Building, Tulsa. Formerly it had its offices in the Philcade Building.

NATURAL GASOLINE MANUFACTURE

August Drop in Pacific Demand Raises Stocks

An early reduction in natural gasoline production and refinery utilization was recorded in the August figures for the industry in the Pacific Coast territory. Production of natural gasoline decreased slightly, amounting to 33,898 bbls. daily as compared to 33,947 bbls. daily the previous month. Refinery utilization declined appreciably and amounted to 23,627 bbls. daily, a decrease of 8,692 bbls. daily. Stocks at the end of August were 2,688,760 bbls., a total increase of 220,711 bbls.

The territory covered in this report of the Bureau of Mines has been increased by the addition of Washington and Oregon. The change affects only demand and stock figures.

NATURAL GASOLINE PLANT OPERATIONS

California Fields, August, 1934

Field—	Gas treated (M.C.F.)	Natural gasoline produced (gallons)
San Joaquin Valley		
Elk Hills	81,391	147,207
Kettleman Hills	10,282,305	13,459,213
Midway-Sunset	1,849,981	2,876,799
Mount.ain View	89,298	102,010
Miscellaneous	456,378	651,514
Coastal region		
Elwood	382,280	520,164
Rincon	75,467	76,647
Santa Maria	148,864	388,355
Ventura Avenue	3,955,664	3,543,566
Miscellaneous	274,217	300,700
Los Angeles Basin		
Coyote	655,151	1,020,885
Dominguez	666,634	1,518,825
Huntington Beach	2,750,377	3,642,231
Inglewood	129,450	199,474
Long Beach	2,106,797	6,538,711
Playa del Rey	187,491	614,613
Richfield	462,237	698,097
Rosecrans	476,499	648,656
Santa Fe Springs	2,968,715	5,195,582
Seal Beach	428,817	604,607
Torrance	110,300	230,958
Miscellaneous	260,717	856,163
Totals (all fields)	27,298,030	44,135,176

DISTRIBUTION

(Gallons)

Stocks beginning of mo.	3,453,843	
Production during mo.	44,135,176	
Delivered to refineries.		38,981,237
Delivered to jobbers, brokers or blenders..		5,230,512
Blended at plants for prod'tn of mtr. fuel		3,391
Losses		96,950
Stocks end of month...		3,276,879
To:als (to balance)..	47,589,019	47,589,019
Liquefied petroleum gas production		791,800
Motor fuel produced		4,791

SUPPLY AND DEMAND

(Barrels)

Supply	August Natural gasoline inc. liquefied petrol. gas (bbls.)
Total production	34,506
Stock transfer (deliveries) receipts—net	7
Net total	34,513
Deduct refinery requirements:	
Run to stills	2,594
Blended	21,033
Total	23,627
Add refined output	
Natural gasoline—net	162
Net refined production	162
Net current supply	11,048
Demand	
Domestic demand incl. bunkers...	799
Shipments to Alaska and Hawaii.	3
Rail and truck shipments to U. S. points outside Pacific Coast ter..	4
Demand in domestic market area	806
Shipm'ts: Pac. for. inc. Canal Zone	1,729
Total market demand	2,535
Losses (gains) unaccount'd for—net	1,411
Total current demand	3,946
Surplus or (deficit)	7,102

Record Volume of Natural Gasoline Is Produced in East Texas in August

The East Texas Field produced 5,100,000 gallons of natural gasoline during August to establish a new record for that field according to the latest report of the Bureau of Mines. The month's production exceeded that of such well known fields as the Appalachian, Osage of Oklahoma, the State of Kansas, North Texas, Louisiana, Rocky Mountain states, Huntington Beach in California and the Ventura Avenue. The August production almost equals that of Santa Fe Springs, one of the most prolific fields in California.

So far this year the East Texas Field has produced more than double the quantity of natural gasoline it produced for the same period in 1933. Over the first eight months of this year 27,200,000 gallons have been recovered, compared with 12,500,000 gallons in the same period last year. The mounting production monthly is partly accounted for by the larger number of wells connected and partly by the fact that richer gas is coming to the plants. In some instances this has been the result of placing a vacuum on the gathering lines.

The natural gasoline production has also been increased through the practice of crowding the separators so that some crude oil often comes into the natural gasoline plant. While the latter is not to be considered a standard practice, it has proved of sufficient importance at times to greatly boost the gasoline output of certain plants.

Larger production of importance is also reported for the Panhandle and Kettleman Hills fields. In the Panhandle the August production is shown as 21,400,000 gallons and compares with 19,200,000 gallons for the previous month. The Kettleman Hills production for August was 13,900,000 gallons and in the previous month was 12,500,000 gallons.

Total production for the United States is reported as 127,300,000 gallons in August and 123,700,000 gallons in July. This increase of about 3,500,000 gallons is practically accounted for in the figures discussed above.

Stocks of natural gasoline at plants remained practically unchanged throughout August, despite higher total yield. At the close of the month stocks were less by about 38,000 gallons, compared with those on the first of the month. The stocks of natural for a longer period are shown in the accompanying table.

PRODUCTION AND STOCKS BY FIELDS

(Thousands of gallons)

	Production Aug., 1934	Production July, 1934	Production Jan.-Aug., 1934	Production Jan.-Aug., 1933	Stocks end of month Aug., 1934	Stocks end of month July, 1934	Aug., 1934 Used at refineries	Aug., 1934 Naphtha purch'd for blending
East Coast	....	....	....	....	....	....	1,512	....
Appalachian	2,900	2,700	35,600	36,300	3,754	4,490	966	199
Ill., Ky., Mich.	600	500	5,100	5,400	238	335	6,426	11
Oklahoma	28,300	28,100	235,000	235,500	26,254	26,718	14,490	92
Oklahoma City	7,500	7,700	67,300	59,200	5,844	5,961	(*)	..
Osage County	3,900	3,400	28,400	27,100	5,243	5,703	(*)	9
Seminole	7,000	7,000	57,300	73,400	6,901	6,232	(*)	4
Rest of State	9,900	10,000	82,000	75,800	8,261	8,822	(*)	79
Kansas	2,100	1,800	17,100	16,100	1,948	1,588	5,208	9
Texas	40,100	38,100	292,100	236,100	26,905	27,236	21,546	703
East Texas	5,100	4,900	27,200	12,500	536	537	(*)	703
North Texas	1,500	1,600	13,700	16,700	816	537	(*)	..
Panhandle	21,400	19,200	157,500	115,100	20,616	21,413	(*)	..
West Central	6,800	7,100	57,400	51,400	3,169	2,684	(*)	..
Rest of State	5,300	5,300	36,300	40,400	1,768	2,065	(*)	..
Louisiana	3,200	3,100	26,800	25,000	2,967	1,157	1,092	..
Arkansas	1,100	1,100	8,600	10,400	170	211	1,470	557
Rocky Mountain	4,900	4,700	37,900	35,700	1,231	1,489	2,982	17
California	44,100	43,600	328,300	327,000	3,277	3,454	30,786	(*)
Huntington Beach	3,600	3,700	25,700	14,000	(*)	(*)	(*)	(*)
Kettleman Hills	13,900	12,500	96,100	83,800	(*)	(*)	(*)	(*)
Long Beach	6,500	6,900	50,900	62,000	(*)	(*)	(*)	(*)
Santa Fe Springs	5,200	5,400	42,000	56,000	(*)	(*)	(*)	(*)
Ventura Avenue	3,500	3,700	28,900	29,300	(*)	(*)	(*)	(*)
Rest of State	11,400	11,400	84,600	81,700	(*)	(*)	(*)	(*)
Total	127,300	123,700	966,400	925,500	66,744	66,778	86,478	1,587
Daily average	4,110	3,990	4,000	3,810	....	....	2,790	51
Total (thous. of bbls.)	3,031	2,945	23,485	22,036	1,589	1,590	2,059	38
Daily average	98	95	97	91	....	....	68	1

*Not available.

PRODUCTION AND DISTRIBUTION OF NATURAL GASOLINE

(Thousands of barrels of 42 gallons)

	Aug., 1934 Total	Aug., 1934 Daily av.	July, 1934 Total	July, 1934 Daily av.	Jan.-Aug., 1934	Jan.-Aug., 1933
Production	3,031	98	2,945	95	23,485	22,036
Decrease in all stocks	....	..	15	..	.....	.....
Total	3,031	98	2,960	95	23,485	22,036
Blended at refineries	1,973	63	2,035	66	15,494	14,587
Run through pipe lines in Calif.	81	3	107	3	804	823
Jobbers, exports, etc.	525	17	511	16	3,317	3,697
Increase in all stocks	239	8	...	..	1,110	576
Losses	213	7	307	10	2,660	2,353
Total	3,031	98	2,960	95	23,485	22,036

PRODUCTION OF MOTOR FUEL

(Thousands of barrels of 42 gallons)

	Aug., 1934 Total	Aug., 1934 Daily av.	July, 1934 Total	July, 1934 Daily av.	Jan.-Aug., 1934	Jan.-Aug., 1933
Refinery gasoline:						
Straightrun	18,226	588	18,381	593	139,575	120,208
Cracked	16,965	547	16,500	532	119,075	118,986
Natural gasoline:						
Production	3,031	98	2,945	95	23,485	22,036
Deduct losses	213	7	307	10	2,660	2,353
Benzol	115	4	122	4	1,142	859
Total motor fuel	38,124	1,230	37,641	1,214	280,617	269,736

STOCKS OF NATURAL GASOLINE HELD AT PLANTS ON FIRST OF MONTH

	Bbls.
1933—	
January	18,840,000
February	22,635,000
March	27,343,000
April	31,594,000
May	34,167,000
June	38,834,000
July	36,681,000
August	39,911,000
September	35,577,000
October	27,760,000
November	24,043,000
Decem er	25,586,000
1934—	
January	41,664,000
February	41,679,000
March	41,132,000
April	42,918,000
May	53,587,000
June	63,705,000
July	69,129,000
August	66,778,000
September	66,744,000

Roosevelt Buys Earlsboro Plant From Superior Oil

J. W. Clark McKee, representing interests identified with the Roosevelt Oil Co. of Michigan, purchased the Earlsboro, Okla., natural gasoline plant of the Superior Oil Corp. this week and will transfer the entire equipment to Michigan. There it will be reassembled on the Theodore Oil Co.'s J. M. Campbell lease in Section 17, Porter Township. The plant will process gas taken from the Porter Pool and the residue will be sold to the Dow Chemical Co. of Midland.

The gas has a gasoline content of slightly better than 1 gallon per 1,000 feet and the plant is expected to recover approximately 6,000 gallons per day. The natural gasoline will be shipped to the Roosevelt refinery for blending with the refinery production.

The 6-inch pipe line leading from the gasoline plant site to the Dow Chemical plant is being laid. Foundations and preliminary grading has been started. Construction of the plant is expected to be completed by December 1.

Development Plans for Edison, Darrow Field

WASHINGTON, D. C., Oct. 8.—Plans for the development of oil fields in Kern County, California, and Ascension Parish, Louisiana, were approved by Secretary Ickes, oil administrator. The Edison (Duff) Field in California and the Darrow Field in Louisiana are involved.

The plan for the development of the Darrow Field provides that it shall remain effective so long as the code continues; authority is granted for drilling wells 400 feet apart as to each individual producing sand; that development shall be so limited as to avoid disruption or material disturbance of the petroleum market; that production shall not exceed allowable quotas, and in order to conserve the natural resources of the pool, production shall be without waste, limited to production that can be beneficially used and limited so that gas will not be unduly wasted in producing oil; authority is granted for continuous operation of the two drilling rigs; drilling programs beyond this year are to be submitted later; the plan may be amended as developments in the field may require.

The plan for the Edison (Duff) Field, as approved by the administrator, provides that the plan shall be effective until the code has no further legal effect; that locations of all wells drilled must be first approved by the oil umpire.

NEWS FOR PETROLEUM REFINERS

Associated Oil Expands Markets Into Montana

Extension of Associated Oil Co. marketing operations into Montana effective immediately, was announced today by P. E. Allan, domestic sales manager of the company. Associated will market its products through W. E. Rice Co., Inc., of Great Falls, and E. L. DeMers of Butte. These distributors control a large number of outlets in principal cities and towns in Montana. Other distributors will be announced later.

This latest move brings the number of states and territories where Associated products are marketed to nine — California, Oregon, Washington, Hawaii, Nevada, Arizona, Idaho, Utah and Montana. "Entry of Associated into the Montana field is another step in our program to establish Associated products and service in every part of the western territory," Mr. Allan said. "We feel that the marked improvement in business conditions, reflected particularly in the increased sale of automobiles and petroleum products, justifies our move at this time. A $350,000 service station construction program along the entire Pacific Coast and a consistent newspaper advertising schedule are also major parts of our expansion program."

Marking a new and important development for better service to the motoring public, the Associated Oil Co. has also established a system of Certified Clean Comfort Stations. Comfort stations that meet the requirements will be certified to the public by the Associated Oil Co. A regular systematic inspection will be made.

INSTALL NEW EQUIPMENT

PETROLIA, Ontario, Oct. 6.—A number of new installations are being made at the refinery of Canadian Oil Companies, Ltd., here. An automatic canning machine, made by the Canadian Gas Co., and capable of filling and automatically sealing 2,000 quart cans per hour, has been installed in connection with the company's new policy of selling lubricants for the motor trade in sealed cans.

Two 4,200-bbl. tanks are being erected as part of the equipment for a new ethylizing plant. A 3,500-gallon electric-welded ethyl-fluid storage tank is also under construction.

The ethylising plant will be fully equipped in the most modern scientific manner and operated with every safeguard for the workmen. Shower baths will be installed, and from individual lockers the men will be supplied each day with a complete change of clothing including rubber gloves and shoes.

MORE MICHIGAN PLANTS

MUSKEGON, Mich., Oct. 8.—Ground was broken last week in the village of Wyman, Montcalm County, for a new 500 to 1,000-bbl. skimming plant being erected by Max Pray of Detroit, formerly of East Texas. It is located 3 miles north of Edmore, near the Home Township, Moltcalm County, producers. It is the first of several prospective refineries to be located in Michigan. McClanahan Refining Co. is planning to start construction of a slightly larger plant in St. Louis, Mich.

ROAD OIL MEETING

Economical, all-weather highway surfacing that can be constructed at one-tenth the cost of present expensive types will be discussed at the Fourth Annual Road Oil Congress to be held in Tulsa November 22 and 23.

50-CITY GASOLINE PRICE DROPS IN SEPTEMBER

The average service station price excluding taxes for the regular grade of gasoline in 50 cities scattered throughout the United States on October 1, 1934, was 13.58 cents. A marked drop in the 50-city price occurred after September 11 due to price decreases effected by the Standard Oil Co. of Indiana. Prices during July and August showed little fluctuation. The figure on August 1 was 13.99 cents, and on September 1, 13.95 cents. Retail prices have reflected general stability in the past year. The price on October 1, 1933, was 14.45 cents.

Home Oil Contracts for Parsons Cracking Unit

MOUNT VERNON, Ohio, Oct. 8.—Home Oil Refining Co. has let a contract to the Ralph M. Parsons Co. of Mount Vernon to remodel its refinery located at Great Falls, Mont.

The construction will include the latest type of cracking unit designed by Parsons to operate the Dubbs cracking process. The unit will be of the two-coil selective cracking type, of 1,000-bbl. capacity and will be equipped with a stabilizer, an absorber and a special treating system. Additional boilers and equipment for vacuum distillation of asphalt will also be installed.

The refinery at present consists of a 1,200-bbl. pipe still, equipped with a Braun fractionating column and two 80-horsepower boilers. The plant is now running on Pondera and Oregon Basin crudes, producing gasoline, kerosene, gas oil, fuel oil and road oil.

FORT NORMAN REFINING

EDMONTON, Alberta, Oct. 6.—Refining operations at plant of the Imperial Oil, Ltd., in the Fort Norman Field of the Far North have been concluded for the 1934 season, and the operators have returned to Edmonton. From the standpoint of production and distribution the operations were highly successful. The output of the plant consisted of gasoline and fuel oils, used largely on the boats of the Great Bear Lake and adjacent rivers, and in the Great Bear mining operations.

About 1,000 bbls. of gasoline and oil were left in stock at Fort Norman. Operations will be resumed next spring. The plant is supplied with crude from two wells. A third well at Bear Island is being prepared for future development.

CANADIAN PETROLEUM IMPORTS

OTTAWA, Ontario, Oct. 6.—Official figures of the federal department of trade and commerce show that imports of petroleum, asphalt and their products into Canada in July were valued at $4,146,837. The valuation of June imports was $4,469,070. Main sources of imports, with percentages, were: United States, 73.4; Peru, 12.1; Colombia, 11.6; Venezuela, 1.8.

Crude petroleum imports in July amounted to 116,883,335 gallons as compared with 114,880,249 gallons in June. The sources of imports were: United States, 82,984,643 gallons; Colombia, 16,775,362; Peru, 13,432,020; Venezuela, 3,691,310. Petroleum and petroleum products exported from Canada in July were valued at $81,175, compared with $234,164 in June.

Refining and Marketing Committees to Be Named

Two committees of 15 members, authorized to nominate 20 elective members of divisional general committees, have been appointed by the respective chairmen of the Division of Refining and Division of Marketing of the American Petroleum Institute. Elections will be held in connection with the Institute's annual meeting scheduled for November 12 to 15 at Dallas, Tex. At that time five additional members of the divisional general committees will be appointed by the Institute's board of directors.

Walter Miller, of the Continental Oil Co., Tulsa, is chairman of the Division of Refining's 1934 nominating committee. The members are: H. T. Bennett, Mid-Continent Petroleum Corp., Tulsa; T. G. Delbridge, Atlantic Refining Co., Philadelphia, Pa.; R. A. Halloran, Standard Oil Co. of California, San Francisco; R. T. Haslam, Standard Oil Development Co., New York; R. E. Haylett, Union Oil Co. of California, Los Angeles; W. W. Lowe, Henry L. Doherty & Co., New York; F. T. Manley, The Texas Co., New York; G. G. Oberfell, Phillips Petroleum Co., Bartlesville, Okla.; R. C. Osterstrom, Pure Oil Co., Chicago; M. G. Paulus, Standard Oil Co. (Indiana), Chicago; A. E. Pew, Jr., Sun Oil Co., Philadelphia; J. B. Rather, Socony-Vacuum Oil Co., New York; G. H. Taber, Jr., Sinclair Refining Co., New York, and F. W. L. Tydeman, Shell Development Co., San Francisco.

Charles L. Suhr, The Pennzoil Co., Oil City, Pa., is chairman of the Division of Marketing's 1934 nominating committee. The members follow: E. P. Angus, Magnolia Petroleum Co., Dallas, Tex.; E. J. Bullock, Standard Oil Co. (Indiana), Chicago; H. A. Coffin, White Star Refining Co., Detroit, Mich.; R. K. Davies, Standard Oil Co. of California, San Francisco; C. A. Ellis, Socony-Vacuum Oil Co., Inc., New York, and B. I. Graves, Associated Oil Co., San Francisco.

FILES SUIT AGAINST DERBY

CHICAGO, Oct. 6.—A suit charging cracking patent infringement has been filed by Universal Oil Products Co. against the Derby Oil & Refining Corp., which operates a refinery at Wichita, Kans.

The suit was filed in the U. S. District Court for the District of New Jersey at Newark, N. J. It charges infringement of patent No. 1,392,629, the Dubbs clean circulation patent, which was upheld last spring in Wilmington, Del., by Judge John P. Nields in deciding a suit brought by Universal against Root Refining Co.

The Derby Oil & Refining Corp. was formerly a licensee of Universal, operating the Dubbs process. The petition sets forth that Derby, since August, 1931, has withheld payment of royalties, as a consequence of which in June, 1933, Universal cancelled the license agreement.

The suit seeks to collect royalties for the use of the Dubbs process by Derby during the time it did not pay royalty and profits and damages by reason of Derby's alleged infringement of the Dubbs clean circulation patent since the cancellation of the license contract.

CLOSE SECURITY REFINERY

The 3,000-bbl. refinery at Chase, Kans., once operated by the Security Petroleum Corp., has been shut down and supervision of the properties has been placed in the hands of a trustee appointed by the local Federal court.

NEW SHELL STATION

GODERICH, Ontario, Oct. 6.—Shell Oil Co. of Canada has plans for a service station and garage of cement block and brick construction to be erected at the corner of Kingston and St. David Streets at a cost of approximately $5,000.

Tax Reduction Is Made New State Election Issue

Motorist taxpayers in Michigan and Ohio have taken the matter of tax reduction into their own hands and on election day, November 6, will vote upon proposed amendments to state constitutions designed to reduce gasoline tax rates and to assure the use of motor tax revenues only for highways.

Led by the Automobile Club of Michigan, motorists signed petitions for a referendum vote on proposals to fix the state's gasoline tax rate at 2 cents per gallon, a reduction of 1 cent, and to fix registration fees at 35 cents per 100 pounds, a reduction of 20 per cent. All income would be used for roads. Although only 161,000 signatures were needed to assure the proposed amendments being placed on the ballot, the petitions were signed by 850,000 taxpayers.

It is estimated that even with reduced tax rates Michigan will obtain yearly more than $30,000,000 in highway revenues, an amount regarded as ample for the state's highways provided the money is not diverted to other purposes. Savings to motorists are estimated at $15 to $50 per year, and it is expected that the amendments will assure the use on roads of the entire tax revenue from this source. Last year $13,000,000 was diverted to other purposes, and another $13,000,000 so was diverted in the first six months of 1934.

In Ohio the Ohio Highway Users Federation has obtained sufficient signatures to petitions to enable the electorate to vote on proposed amendments designed to reduce the gasoline tax to 3 cents per gallon from 4 cents, to prevent the taxation of motor vehicles as personal property whenever the owners are required to pay registration fees, and to assure the use of all motor tax revenues for highway purposes.

It is estimated that even with tax reduction Ohio will collect yearly from the motorists at least $50,000,000, an amount regarded as sufficient for highway work. In recent months motor tax revenues have been used for a variety of other purposes—schools, hospitals, poor relief, free burials, garbage disposal, city lighting, bond issue payments, public buildings, etc. It is believed that if this income is used only for highways it will be possible to proceed with a 10-year highway program, pay off existing road bond issues, and eliminate all property assessments for rural roads.

The federation, now conducting an intensive educational campaign throughout the state, is composed of representatives of automobile clubs, farm organizations, automobile dealers, motor fuel distributors, road material manufacturers, and others directly interested in highways. It is affiliated with the National Highway Users Conference.

SELL SILENT GLOW

MONTREAL, Quebec., Oct. 6.—Canadian assets of Silent Glow Oil Burner Co. of Canada, Ltd., have been taken over by the Macdonald Metal Products Co., Ltd., of Waterloo, Quebec. The former parent company, the Silent Glow Oil Burner Corp. of Hartford, Conn., retains an interest in the new parent company.

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Year of Dollar Oil Ends With Gasoline Lower

By W. T. ZIEGENHAIN

Trend of Refinery and Retail Gasoline Prices in Mid-Continent

	1929	1930	1931	1932	1933	At present
Crude, 36-36.9 gr., Mid-Continent	$1.37	$1.23	$.63	$.88	$.62	$1.00
Gasoline at refinery (60-64 O. N. Group 3)	.0775	.0634	.0345	.0428	.0363	.04125
Net filling station price in United States (per gal.)	.1791	.1633	.1309	.1330	.1276	.1360
Gross spread between refinery and retail price	.1016	.0999	.0964	.0902	.0913	.09475
Taxes	.0352	.0377	.0395	.0461	.0517	.0519
Cost of gasoline to consumer (per gal.)	.2143	.2010	.1704	.1791	.1793	.1879

After an uninterrupted year of dollar crude, the refining industry is in a position to take inventory of the benefits derived from that portion of the price stabilization program. In general, the refinery gasoline price and the retail gasoline price have each benefited but in both cases anticipation has exceeded realization and at present both markets are relatively weak.

Year of Dollar Oil

The accompanying graph and table were included to permit making a number of comparisons over a period of more than five years. It should be mentioned that the retail gasoline price used here is the average posting on the middle grade or house brand of gasoline in 50 representative cities scattered throughout the United States. At present this average is slightly above that of any year since 1930. The above statement applies to the filling station price free of taxes, and means that slightly better revenues are reported by marketing companies, assuming other factors equal. If the total filling station price is taken into consideration, including tax, a more substantial advance is noted and leads the average consumer to think that oil prices have recovered to a much greater extent than has been realized.

Since 1929 is taken as a basis for wages in formulating labor provisions in the oil code, a comparison between present oil prices and those of 1929 is in line. In 1929 the net price was 17.91 cents a gallon. At present it is 13.6 cents, a reduction of 4.31 cents in the marketing company's revenue.

The average price paid by the public in 1929 was 21.43 cents, whereas now the consumer pays 18.79 cents. Thus, 40 per cent of the benefits that should have gone to the consumer have been absorbed in higher gasoline taxes. More specifically, the average tax has gone from 3.52 cents a gallon in 1929 to 5.19 cents at present.

For the past month, refiners have had to make price concessions on practically all products moving from their plants in bulk and the so-called readjustments in the retail market made recently have meant price reductions almost without exception. Buyers have sensed a freer offering of material without knowing why, because on the surface, the program of stabilization has been moving right along.

Follows Retail Price

Fortunately or unfortunately the course taken by retail gasoline prices usually acts as an index of what to expect in the crude market. Since the beginning of the oil business, the retail market has reflected the paying of premiums for crude before the general advance has been posted and in the same manner the retail market has sensed the offering of crude below the posted price. A sustained drop generally meant but one thing so far as crude prices were concerned.

Over the past year, however, the factor of government in the oil business has been something new, and it has been necessary to revise our ideas in regard to the old laws of cause and effect.

To what extent they must continue to be revised becomes a function of the confidence found in the expanded control program. The recent decline in retail gasoline prices indicates that confidence is weakening.

The ability of refiners to advance their wholesale and retail prices during a strengthening crude market has been demonstrated time and again. It has also been shown that these prices can be stabilized at a rather constant level if the crude market remains healthy—and it has been done without the aid of price fixing, the allocation of gasoline production or major company buying.

Allocation of Gasoline Production

Of the three factors tending to stabilize prices as named above, the Federal allocation of gasoline production has proved the most practical but even the fullness of its benefits remains doubtful. In its routine the stage is set each month for allocators to discuss the apportionment of the gasoline production suggested by the Petroleum Administrative Board. With this done they return home to juggle the runs among the refiners in the respective areas so the total will agree with that given that district by Washington. The program was designed to stop the overproduction of gasoline in order that it be easier to maintain better prices but it did not retard the mounting supply of cheap gasoline coming from East Texas plants. In fact it made it easier to sell East Texas gasoline. It added to the advantages which East Texas already had in the form of cheaply produced oil, favorable market location and easily refinable crude—advantages which those refiners naturally wish to utilize so far as possible.

Major Company Buying

The buying program has proved to be about as ineffectual as price fixing would have been. It was designed principally for use in the Mid-Continent and more particularly in East Texas. While it operated it afforded a very profitable outlet for some East Texas gasoline. It placed a premium on distress gasoline and East Texas refiners as a group could not overlook making more and more distress gasoline. Jealousies developed because one refiner had more distress gasoline than another. Those who co-operated in the plan saw new plants coming into the field.

The allocating of approximately 415,000 bbls. of gasoline for the East Texas group as a monthly production would call for crude runs of about 40,000 bbls. daily. While the gasoline buying was in progress the crude runs of the group exceeded 80,000 bbls daily and in the past two weeks have reached 116,000 bbls. daily.

Listen to Price

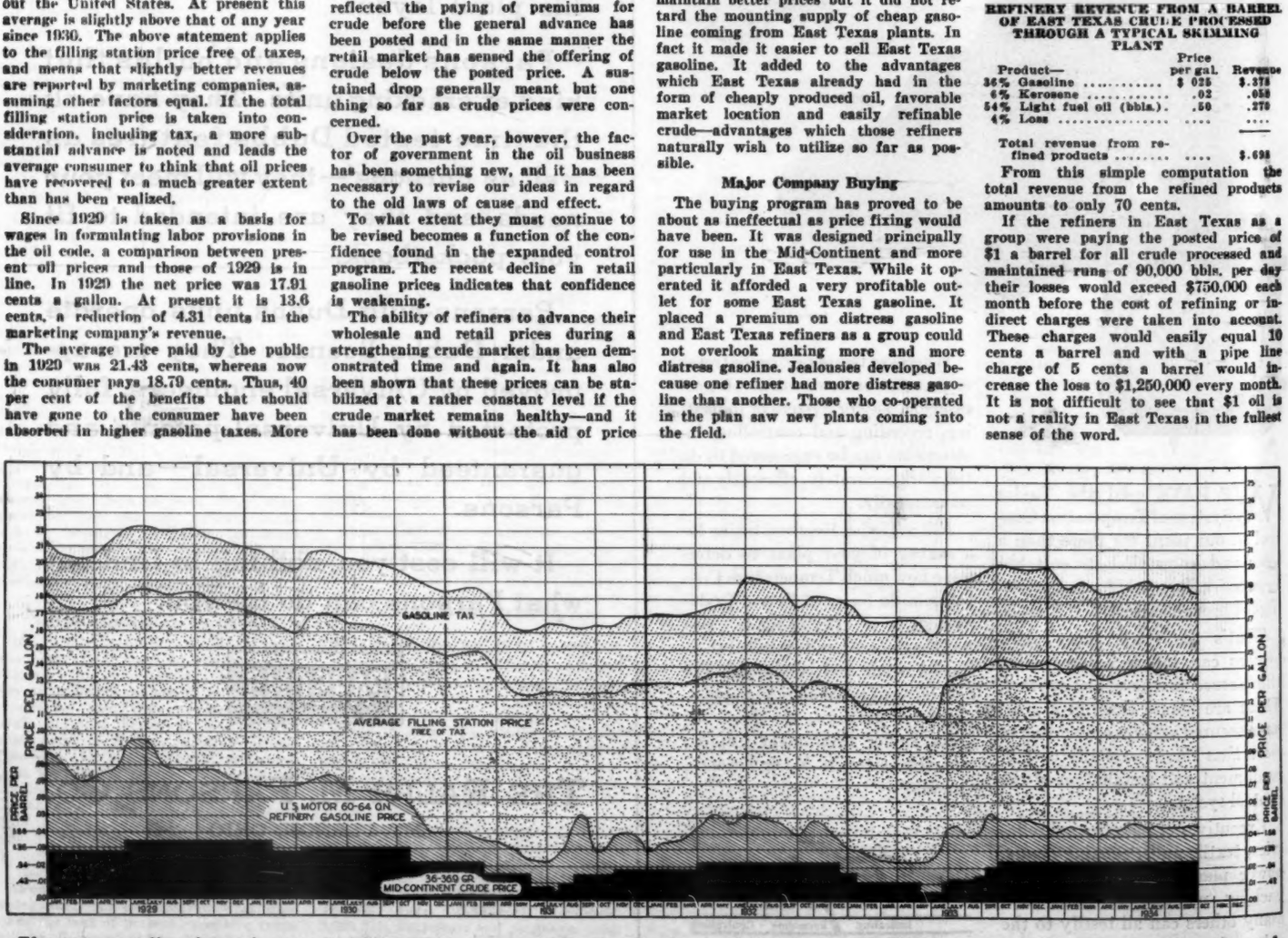
However, this rate has retarded in the past week. There has not been a sufficient demand for the products to maintain that rate even though 60 octane gasoline is being offered in East Texas at 2½ cents and less. A simple plant realization statement offers the best reason why 2½-cent gasoline will slow up refinery runs in East Texas or any place.

REFINERY REVENUE FROM A BARREL OF EAST TEXAS CRUDE PROCESSED THROUGH A TYPICAL SKIMMING PLANT

Product—	Price per gal.	Revenue
36% Gasoline	$ 025	$.378
6% Kerosene	.02	.050
54% Light fuel oil (bbls.)	.50	.270
4% Loss	....	....
Total revenue from refined products	....	$.698

From this simple computation the total revenue from the refined products amounts to only 70 cents.

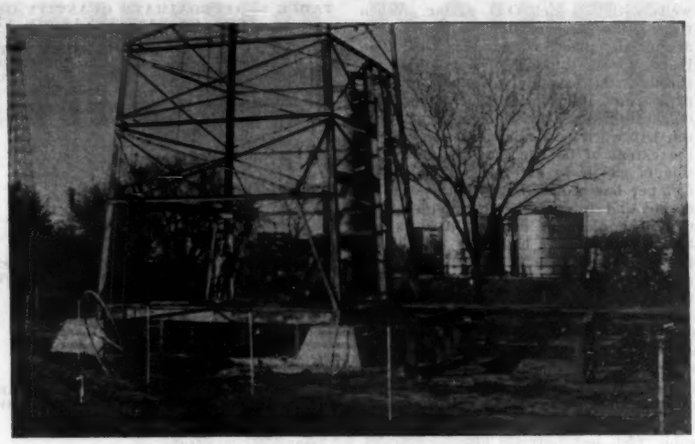
If the refiners in East Texas as a group were paying the posted price of $1 a barrel for all crude processed and maintained runs of 90,000 bbls. per day their losses would exceed $750,000 each month before the cost of refining or indirect charges were taken into account. These charges would easily equal 10 cents a barrel and with a pipe line charge of 5 cents a barrel would increase the loss to $1,250,000 every month. It is not difficult to see that $1 oil is not a reality in East Texas in the fullest sense of the word.



The uppermost line shows the average filling station price paid for gasoline in the United States including taxes. The oil industry has just witnessed one year of dollar crude as shown above. During that time there has been a slight tendency for both filling station and refinery gasoline prices to ease off, indicating that anticipation of the benefits of a fixed crude market has exceeded realization

Natural Gas Energy Should Be Conserved in Flowing Oil Wells

By S. F. SHAW
Consulting Engineer, Westgate Oil Co., San Antonio, Tex.*



Well in the Oklahoma City field produced by gas lift through 2½-inch tubing in 7-inch casing

Oil in flowing wells is lifted by one of two forces, or by a combination of these two forces; (1) by pressure alone, similar to the flow of an artesian well; (2) by gas energy, that is, gas lift.

In some fields, particularly where wells are newly completed, pressure alone may be sufficient for a time to lift the oil to the surface. This pressure may be due to, or controlled by, the hydrostatic head of water surrounding the edges of the field, or by gas pressure within the reservoir. Since the pressure in most fields appears to be related to the hydrostatic head of water, we are led to believe that the water column has been the controlling factor that has determined the pressure in the reservoir up to the time the first well begins to produce.

After wells have produced for a time, as withdrawals from the reservoir occur, it is usual for the pressure in the reservoir to decline, in consequence of which artesian flow can no longer prevail and continuation of flowing conditions depends on the gas energy associated with the oil in the reservoir or on gas supplied from an extraneous source.

As wells have reached to greater depth it has been observed as a rule that flowing conditions are responsible for a greater percentage of the total recovery than was the case in the more shallow fields. It is, therefore, of importance to make a careful study of the conditions existing in a field from the time that the wells are completed until they are ready for abandonment, in order that the gas energy associated with the oil may be utilized to the maximum extent.

Much progress has been made in working out methods for determining the conditions that exist in underground reservoirs since appeal was made in 1928 by Sclater and Stephenson[1] for more work along this line. Apparatus has been perfected by which it is possible to take samples of the oil in the reservoir as soon as the discovery well is completed, at which time the initial reservoir pressure may be determined, the temperature can be observed, the character of the oil and gas may be ascertained by analyzing the samples so taken, and from which the initial gas-oil ratios may be computed. Various facts related to the production of the oil may be deduced from the data brought to light as a result of the examination of the samples taken from the reservoir not only at the time of completion of the discovery well, but also during the various stages of recovery of the oil.

A work of much value along this line is being done by the U. S. Bureau of Mines in taking and examining samples from some of the large oil fields, and publishing the results so obtained. A valuable contribution was made in 1933 by Ben E. Lindsly on the East Texas Field[2], from which study, facts of value may be deduced suggesting better methods of producing the oil in that field.

Lindsly ascertained that the East Texas oil is undersaturated with gas, which does not begin to come out of solution until the pressure has been reduced to about 750 pounds. The quantity of gas per cubic foot of oil was found to be about 66 cubic feet, or approximately 370 cubic feet per barrel of oil.

Energy Required to Lift the Oil

Flash liberation of the gas contained in the East Texas oil indicated that the energy in the gas made available for lifting the oil as the pressure declined was approximately as indicated in Table 1[3].

When the pressure in the East Texas Field has declined from 638 pounds to 14.4 pounds absolute, Lindsly computed that there are made available 328,800 foot-pounds of work per cubic foot of oil, or 1,845,000 foot-pounds per barrel. This is a large amount of energy available for lifting oil, and the utilization of this energy to best advantage is of much importance in this field. Based on experience in gas lift operations, Table 2 was computed to illustrate the relation between the energy available in the gas associated with the oil, and the energy required to lift the oil under given conditions of flowing pressure.

It will be observed in Table 2, for example, that there is sufficient gas associated with the oil, even with a back pressure at the well head of 40 pounds, to flow the well naturally until the bottom hole flowing pressure has declined to 615 pounds absolute. In fact, the well would flow naturally until the bottom hole pressure had declined to nearly 415 pounds, if no back pressure were imposed on the well head and if no disturbances were caused by closing in the well each day. This condition, however, assumes that the well would be provided with the proper size of flow pipe for handling the quantity of oil entering the well under this bottom hole pressure. The quantity of oil flowing would differ in all wells, consequently there would be no theoretically uniform diameter of flow pipe that would serve all of the wells in the field for this particular pressure condition.

After the pressure has declined to a given point, a condition is reached where there is insufficient gas associated with the oil to perform the lifting operation, and at this stage the flowing condition can be maintained only by supplying the deficiency of gas from an outside source. Table 3 gives the approximate quantity of gas necessary to be added to that associated with the oil in the East Texas Field in order to perform the lifting operation under certain assumed conditions of bottom hole flowing pressure and of well head back pressure.

It will be noted in Table 3, for example, when the bottom hole flowing pressure has declined to 415 pounds and when the discharge is at atmospheric pressure, that only a small quantity of gas, amounting to about 75 cubic feet per barrel, must be added in order to continue the flowing operation. If, however, the well head back pressure be held at 75 pounds there will be required some 450 cubic feet of additional gas in order that the well may produce in a continuously flowing condition.

In Hobbs Field

A well in the Hobbs Field was tested at different rates of production and a drawn down curve for that particular well was established. From this curve it is observed that with a bottom hole flowing pressure of 1,400 pounds the production was about 1,300 bbls. per day. The wells in the Hobbs Field are approximately 4,200 feet in depth, and the oil has a specific gravity of about 0.85. Under these conditions of depth and bottom hole flowing pressure about 20 cubic feet of gas are required to lift a barrel of oil, but other tests indicated that about 700 cubic feet of gas were dissolved in the oil. No extraneous gas was added. On the contrary, much more gas was associated with the oil than was required to carry on the lifting operation.

Later in the life of the Hobbs Field this condition will have been changed by reason of the decline in bottom hole pressure, at which stage more gas may be required for the lifting operation than is associated with the oil on its arrival at the well. Assuming the pressure-production curve to hold true to a bottom hole flowing pressure of 100 pounds, the production would be about 6,600 bbls. per day and the quantity of gas required would be about 3,370 cubic feet per barrel. If the gas associated with the oil under these conditions amounted to 700 cubic feet per barrel, there would be a deficiency of 2,670 cubic feet, and to produce 6,600 bbls. under flowing conditions there would need to be added the amount of gas by which the associated gas is deficient. It appears from Table 7 that the well would have ceased flowing naturally at some point between 250 and 500 pounds bottom hole flowing pressure.

Influence of Rate of Flow on the Energy Required to Lift the Oil

It has been observed in some fields that the quantity of output gas per barrel of oil is increased as the rate of production is increased but that the gas-oil ratio from the formation is reduced. An example is given in Table 5 of a well 4,200 feet in depth where conditions were such that tests could be started under natural flow, and then the rate of production increased by the use of additional outside gas. The data on these tests are given in Table 4.

In Table 4 it will be observed that with no gas added to the well, the natural flow was at the rate of 397 bbls. per day, and the gas-oil ratio was 2,540 cubic feet per barrel of oil. When the input gas was added to the extent of 825 cubic feet per barrel, the production was increased to 858 bbls. per day, the output gas was slightly reduced, but the formation gas-oil ratio was reduced to 1,530 cubic feet per barrel. The output gas factor was increased in test 3, owing to the fact that the bottom hole pressure was reduced, thereby allowing a greater amount of oil to enter the well. However, the formation gas-oil ratio did not increase because the increased quantity of gas required to lift the oil was supplied from an outside source.

Influence of Diameter of Flow Pipe on Energy Required to Lift Oil

In the Seminole Field, with bottom hole flowing pressure of 100 pounds, it was possible to lift a maximum of 140 bbls. of oil per day through 3-inch tubing, whereas under the same condition of pressure it was possible to lift 1,300 bbls. per day through the annular space between a casing of 8¼-inch and a tubing of 4-inch.

In the Oklahoma City Field it is possible to lift a maximum of 900 bbls. per day through the annular space between 9-inch O.D. casing and 3-inch tubing with bottom hole pressure of 100 pounds. With the same pressure the maximum quantity that can be lifted through the 3-inch tubing under continuous flow is only about 60 bbls. per day.

In the Oklahoma City Field various operators found it expedient to complete

TABLE 1—FOOT-POUNDS OF WORK DEVELOPED BY THE EXPANSION AT 90° F. OF THE GAS DISSOLVED IN 1 CUBIC FOOT OF EAST TEXAS OIL

Expanding in lb. absolute per sq. in. From	To	Foot-pounds per cu. ft. of oil Actual	Cumulative from 638 lb.	Foot-pounds per bbl. of oil Cumulative from 638 lb.
638	175	58,500	58,500	328,000
175	132	22,100	80,600	453,000
132	95	32,700	113,300	636,000
95	75	19,600	132,900	746,000
75	65	14,100	174,000	825,000
65	55	17,300	164,300	923,000
55	45	18,000	182,300	1,024,000
45	40	15,300	197,600	1,110,000
40	14.4	131,200	328,800	1,845,000

TABLE 2—APPROXIMATE FOOT-POUNDS OF WORK REQUIRED TO LIFT 1 BBL. OF EAST TEXAS OIL AT MAXIMUM CAPACITY OF PIPE UNDER GIVEN CONDITIONS OF BOTTOM HOLE FLOWING PRESSURE AND OF BACK PRESSURE AT THE WELL HEAD

Bottom hole flowing pressure, absolute	Foot-pounds in thousands required to lift 1 bbl. oil — Back pressure on well head — 14.4 lbs. Req'd.	14.4 lbs. Available	40 lbs. Req'd.	40 lbs. Available	75 lbs. Req'd.	75 lbs. Available	100 lbs. Req'd.	100 lbs. Available
1,015	349	1,846	349	1,110	349	746	349	453
915	473	1,846	473	1,110	473	746	473	453
815	647	1,846	647	1,110	647	746	647	453
715	868	1,846	868	1,110	868	746	868	453
615	1,170	1,846	1,170	1,110	1,170	746	170	453

*Paper before Petroleum Division, the A.I.M.E., at Tulsa, October 12, 1934. Author's title: "Gas energy in Flowing Wells."

wells with 6⅝-inch O.D. casing. When these wells cease to flow naturally they are usually placed on gas-lift, using 2½-inch upset tubing. When produced through the casing with bottom hole pressure of 100 pounds, the consumption of gas is about 8,000 cubic feet per barrel, but when water invades the well to the extent of 50 per cent the consumption of gas is in excess of 16,000 cubic feet per barrel of oil. With this size of casing and tubing, the maximum quantity of liquid that can be lifted is between 50 and 150 bbls. per day under flowing pressure of 100 pounds, and under the conditions of 50 per cent water content, the lifting expense becomes excessive. However, when 9-inch O.D. casing and 3-inch or 4-inch tubing are employed, the quantity that can be lifted through the annular space is about 900 bbls. per day with bottom hole flowing pressure of 100 pounds and the quantity of output gas required is under 5,000 cubic feet per barrel. These examples illustrate the importance of providing flow pipe of the proper diameter in order to reduce to a minimum the amount of energy necessary to lift the oil.

When the bottom hole flowing pressure has declined to 100 pounds in such a field as Oklahoma City, it would be better to substitute intermittent flow for continuous flow since a greater production can be made by this method, and the consumption of energy will be reduced thereby.

It has been observed that the energy required to lift oil through the annular space between the casing and tubing, especially if upset tubing be employed, is greater than when lifting through a pipe having an area equivalent to that of the annular area. Also, it appears from data so far obtained that less energy is required to lift oil at maximum capacity through a pipe of large diameter than through one of small diameter under similar conditions of bottom hole flowing pressure. For instance, oil of 0.82 specific gravity has been lifted through 4,200 feet of 3-inch tubing under bottom hole pressure of 100 pounds with expenditure of 4,300 cubic feet per barrel, whereas the quantity of gas required to lift a barrel of oil through the annular space between 8¼-inch casing and 3-inch tubing under the same bottom hole pressure was 2,300 cubic feet per barrel.

In Oklahoma City

In the Oklahoma City Field a well completed with 9-inch O.D. casing was placed on gas lift, employing 2½-inch tubing which was later changed to 3-inch tubing. Data on the relative quantities of input gas required to flow the oil are given in Table 5.

Reversal of flow from tubing to casing was made on successive days in order to be certain that the general reservoir conditions remained the same during the comparative tests.

This does not mean, however, that at any time in the life of an oil well, the flowing pressure will be the same whether flowing through a 3-inch tubing or through the 8¼-inch casing. An example may be mentioned where the hook-up in a well 4,200 feet in depth provided with 8¼-inch casing and 3-inch tubing was such that the flow could be turned through either the 3-inch tubing or through the annular space between the tubing and casing, under which conditions data were obtained as given in Table 6.

The diameter of the flow pipe assumes increasing importance as wells increase in depth. Greater depth usually implies a higher reservoir pressure, which factor in itself would permit use of a smaller diameter casing to handle a given rate of flow. On the other hand, when the reservoir pressure in a deep well declines greatly, the problem of lifting the oil remaining in the reservoir assumes much importance. For instance, at Kettleman Hills, in a well 9,000 feet in depth, with bottom hole pressure at 2,000 pounds, the quantity of gas required to lift a barrel of oil is about 130 cubic feet, but when the pressure declines to 100 pounds the quantity of gas required is increased to about 9,000 cubic feet per barrel.

At Binger, Okla., which has recently come in for some attention because of an approximate depth of 10,000 feet, about 190 cubic feet of gas would be required to lift 1 bbl. of oil with bottom hole pressure of 2,000 pounds, but when the pressure declines to 200 pounds about 5,300 cubic feet per barrel will be required. This quantity of gas, under low pressure, will require a large diameter of casing to handle it. Otherwise the friction loss would become so great that the back pressure imposed on the sand would allow little or no oil to enter the well.

These illustrations indicate the importance of making careful study of conditions existing in the reservoir at the time of completion of the first well. This facilitates the casing program for succeeding wells.

Influence of Proration on Energy Required to Lift the Oil

During the past three or four years, wells in large flush fields have been severely restricted in production in consequence of which the decline in reservoir pressure has been very slow. This decline has been dependent on the production rate, the advance of edgewater, on the quantity of gas that is produced with the oil, and possibly is influenced by the separation of gas from the oil, and the formation of gas caps after the pressure has been reduced to that point at which gas begins to dissociate from the oil. In pools where the oil is saturated with gas, the gas tends to come out of solution as soon as any appreciable reduction in reservoir pressure takes place.

The energy required to lift oil under conditions of high reservoir pressure and, therefore, of high fluid level, may be illustrated by analysis of approximate conditions such as would probably exist in the Hobbs Field when produced at different rates of flow as given in Table 7.

TABLE 3—APPROXIMATE QUANTITY OF EXTRANEOUS GAS REQUIRED TO LIFT 1 BBL. OF EAST TEXAS OIL AT MAXIMUM CAPACITY OF PIPE UNDER GIVEN CONDITIONS OF BOTTOM HOLE PRESSURE AND OF WELL HEAD BACK PRESSURE

Bottom hole flowing pressure, absolute	Cu. ft. of gas required to lift 1 bbl. of oil — Back pressure in lbs. per sq. in. absolute at well head					
	14.4	40	45	55	65	75
1,015	0	0	0	0	0	0
915	0	0	0	0	0	0
815	0	0	0	0	0	0
715	0	0	0	0	10	25
615	0	15	30	50	80	100
515	0	90	110	150	180	210
415	75	250	280	340	390	450
315	270	265	620	720	830	940
215	690	1,290	1,420	1,665	1,935	2,240
115	2,400	5,000	5,700	7,400	9,200	12,900

TABLE 4—QUANTITY OF GAS REQUIRED TO LIFT 1 BBL. OF OIL FROM A 4,200-FOOT WELL AT DIFFERENT RATES OF FLOW

Test No.	Input gas per bbl. of oil, cu. ft.	Bbl. oil lifted per day	Output gas per bbl. of oil, cu. ft.	Formation gas-oil ratio, cu. ft.
1	....	397	2,540	2,540
2	825	858	2,355	1,530
3	1,061	914	2,576	1,515
4	1,346	912	2,835	1,489

TABLE 5—QUANTITY OF INPUT GAS REQUIRED TO LIFT 1 BBL. OF OIL IN THE OKLAHOMA CITY FIELD THROUGH DIFFERENT SIZES OF PIPE

How flowed—	Oil per day, bbl.	Input gas per bbl. of oil, cu. ft.
Through 2½-inch tubing	565	1,390
Through annular space between 9-inch and 2½-inch	6,865	570
Through 3-inch tubing	888	1,095
Through annular space between 9-inch and 3-inch	5,928	597

TABLE 6—PRESSURES AND GAS RATIOS OBTAINED WHEN FLOWING THROUGH 4,200 FEET OF PIPES OF DIFFERENT DIAMETERS

How flowed—	Bottom hole flowing pressure, lbs. per sq. in.	Oil per day, bbls.	Cu. ft. gas ratios per bbl. oil — Input	Output	Formation
Through 3-inch tubing	82	92	3,540	4,760	1,220
Through annular space between 8¼-inch casing and 3-inch tubing	43	805	2,040	2,822	782

TABLE 7—QUANTITY OF GAS REQUIRED TO LIFT 1 BBL. OF OIL IN THE HOBBS FIELD UNDER ASSUMED CONDITIONS OF BOTTOM HOLE PRESSURE, AT THE STAGE WHEN THE RESERVOIR PRESSURE IS 1,560 POUNDS

Depth, ft.—	Flowing pressure, lbs.	Submergence, ft.	Lift, ft.	Cu. ft. required to lift 1 bbl. oil	Oil produced per day, bbls.
4,200	1,500	4,050	150	8	50
4,200	1,000	2,700	1,500	80	4,400
4,200	500	1,350	2,850	380	6,150
4,200	250	675	3,525	1,140	6,500
4,200	100	270	3,930	3,370	6,600

TABLE 8—QUANTITY OF GAS REQUIRED TO LIFT 1 BBL. OF OIL IN THE HOBBS FIELD UNDER ASSUMED CONDITIONS OF BOTTOM HOLE PRESSURE, AT THE STAGE WHEN THE RESERVOIR PRESSURE IS 600 POUNDS

Depth, ft.—	Flowing pressure, lbs.	Submergence, ft.	Lift, ft.	Cu. ft. required to lift 1 bbl. oil	Oil produced per day, bbls.
4,200	590	1,600	2,600	270	30
4,200	550	1,490	2,710	320	500
4,200	400	1,084	3,116	530	2,200
4,200	300	813	3,387	830	2,900

A test on oil from the Hobbs Field under pressure of 1,374 pounds indicates that 670 cubic feet of gas is dissolved in 1 bbl. of oil when measured at 13.2 pounds atmospheric pressure.[1] It appears from Table 7 that when about 50 bbls. per day is produced with bottom hole flowing pressure of 1,500 pounds that the lift is only 150 ft., under which condition only 8 cubic feet of gas is required to lift a barrel of oil. The dissolved gas content is in excess of 670 cubic feet per barrel; therefore, a large excess of gas must be produced with the oil which cannot be reduced by any known means.

The flowing pressure of 1,500 pounds with a lift of only 150 feet is very close to artesian flow. Even with bottom hole pressure reduced to 1,000 pounds, the quantity of gas required to lift the oil is very small. This is the result of extracting oil at a low restricted rate during the period while bottom hole pressures are high.

It will be observed from Table 7 that with a reservoir pressure of 1,560 pounds there is sufficient dissolved gas to lift the oil naturally until the flowing pressure is reduced to some point between 500 and 250 pounds. At this stage in the life of the well, with flowing pressure of 250 pounds, the production is about 6,500 bbls. per day, but the gas required to lift the oil under this pressure is about 1,140 cubic feet per barrel. Therefore, the well will cease to flow naturally before this point of production is reached unless extraneous gas is added, or unless sufficient gas becomes dissociated from oil which is not lifted and becomes mixed with the gas associated with the oil actually lifted. So far as lifting energy is concerned, it makes no difference at what rate the oil is produced until the bottom hole pressure is reduced below 500 pounds, since there is sufficient gas dissolved in the oil to handle the lifting operation up to, and somewhat beyond, this point of flowing pressure. However, wells could not be produced at the rate of 6,000 bbls. or more per day for more than a short time before the reservoir pressure would be reduced below the pressure required to maintain a flowing pressure between 250 and 500 pounds. When this pressure is reached there is not sufficient gas dissolved in the oil to lift it to the surface.

As an illustration of the effect of a much lower reservoir pressure, it is assumed that this pressure of 1,560 pounds has declined to about 600 pounds and that the draw-down curve is such that the production is that indicated in Table 8. Under this lower reservoir pressure the quantity of gas actually dissolved in the oil is in the neighborhood of 300 cubic feet per barrel, and the lifting requirements of gas are as indicated in Table 8.

In Table 8 it will be noted that when producing at approximately 30 bbls. per day, with flowing pressure of 590 pounds, the lift is 2,600 feet and the gas required to lift the oil is approximately 270 cubic feet per barrel. Since the gas dissolved in the oil is about 300 cubic feet per barrel, the well will flow naturally with the dissolved gas at this pressure. This assumes, however, that the proper size of flow string would be used for producing 30 bbls. per day. It is not likely that with only 300 cubic feet of gas per barrel of oil the well would flow naturally at the rate of 30 bbls. per day through 7-inch O.D. casing. Therefore, it would be necessary to run a string of tubing through which to flow the oil. For pressures of 550 pounds or lower, it will be noted in Table 8 that the gas dissolved in the oil is not sufficient to flow the well naturally.

In East Texas

In the East Texas Field severely restricted production has resulted in maintaining the reservoir pressure at a high point, consequently the energy requirements for lifting the oil are low. Under these conditions the allowable from most of the wells is produced through the tubing under natural flow during a short period each day. This procedure necessitates closing in the wells each day and starting them again the next day.

Recently there has been some difficulty in starting some of the wells, owing to locally lowered pressure, to encroachment of edgewater, to separation of gas during the period that the well is closed in, and to deposition of paraffin in the tubing.

Due to the high reservoir pressure in excess of 1,200 pounds and to the quantity of gas dissolved in the oil amounting to about 370 cubic feet per barrel, only a small quantity of extraneous gas is required to start most of the wells flowing. In some cases, the wells flow naturally after being started, in other cases only a small quantity of additional gas is required to maintain the flow. (See Table 3.)

Several operators have taken advantage of these favorable conditions in the East Texas Field by installing a small compressor unit to start the well, and, when necessary, to maintain the flow. The cost of installing such a unit with capacity at the present time of approximately 10 wells is about $8,500 for new equipment, and from $2,500 to $4,500 for used equipment. On this basis the investment ranges from $850 to $250 per well. This low expenditure is dependent on severely restricted production and on maintenance of high reservoir pressure. Should it become necessary to increase production materially, or should the reservoir pressure decline considerably, additional compressor units will be required.

Proration has been in effect in the Oklahoma City Field practically from the time of opening the field. At the present time, 75 per cent of the production is being obtained from the Wilcox sand, the allowable being from 6 to 7½ per cent of the potential which is based on taking four-hour production tests. Practically all of the wells in the Wilcox zone have flowed their production naturally until within the past year, but now the majority of the wells are pro-

(Continued on Page 39)

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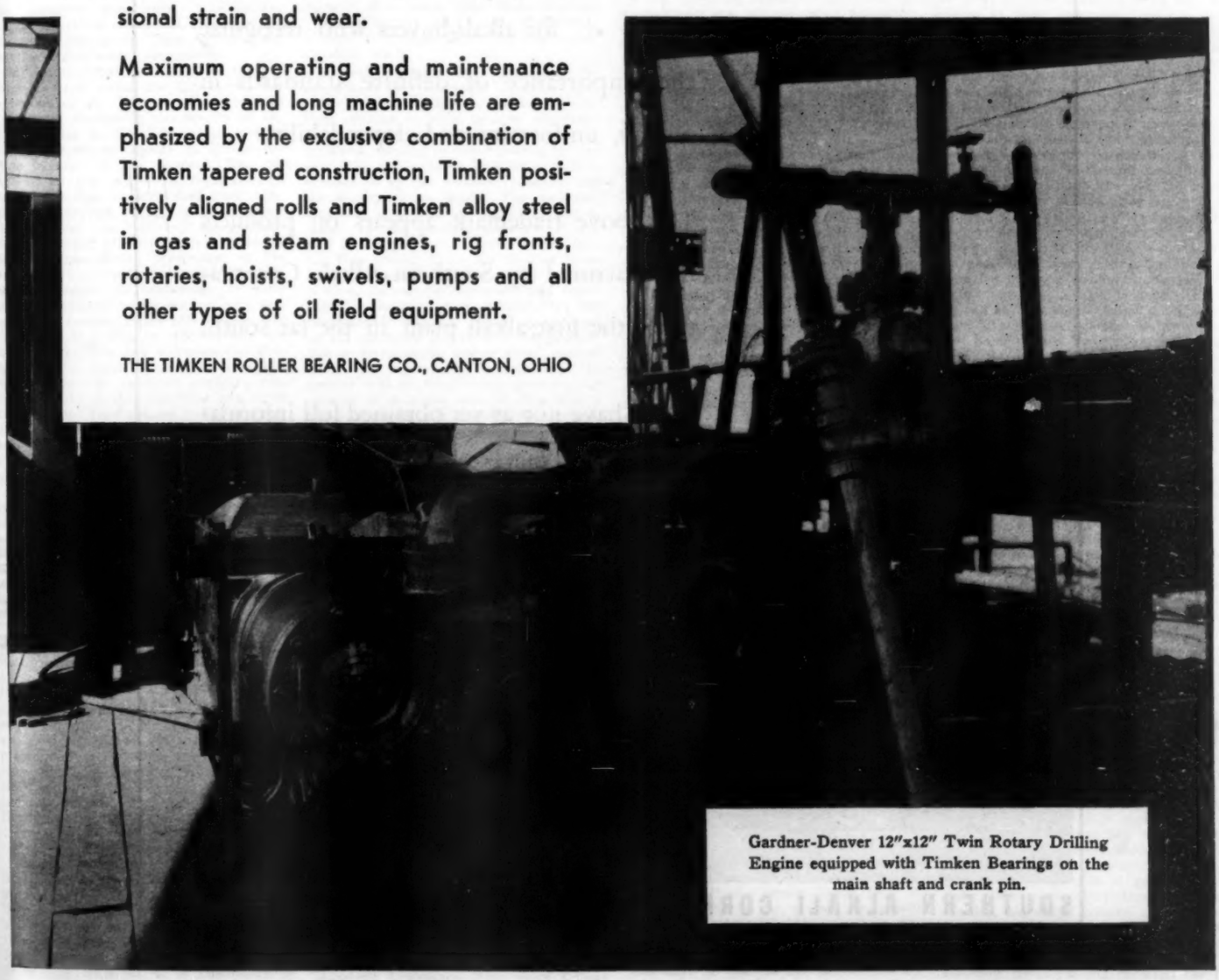

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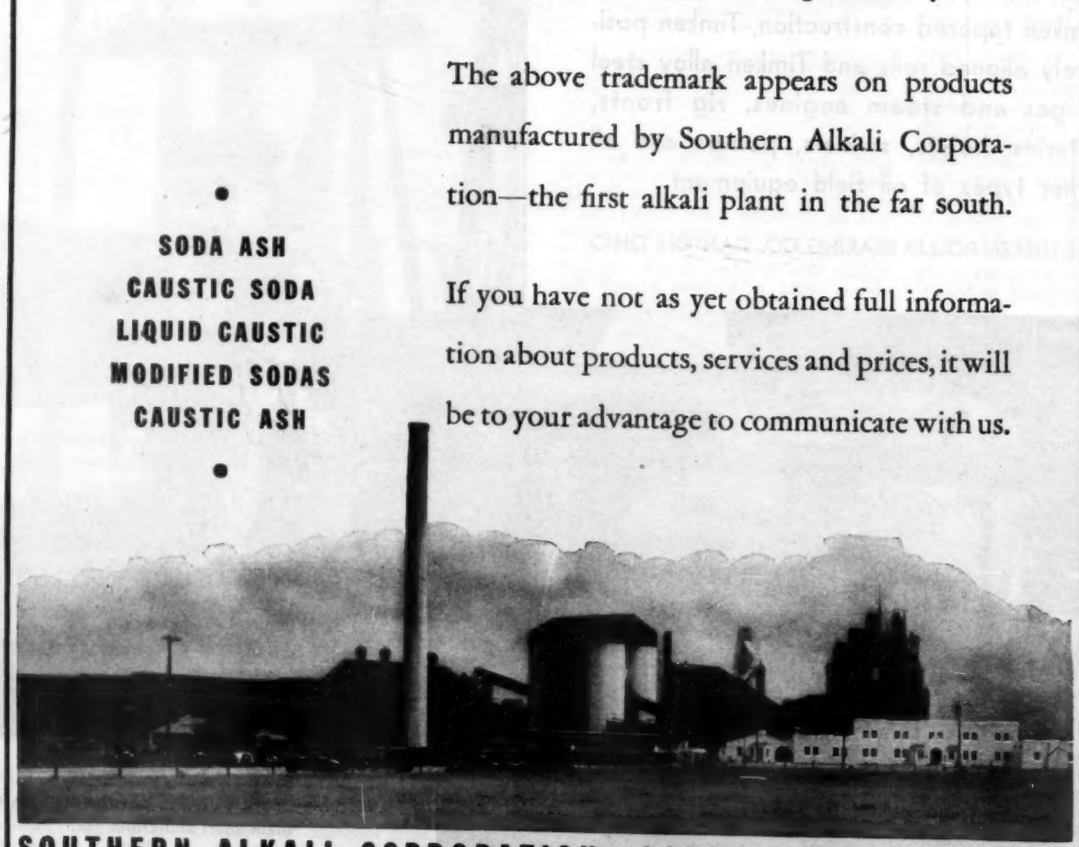

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Changed Conceptions of Gas Lift Applied to Restricted Pools

By LYNDON L. FOLEY
Marathon Oil Co., Tulsa*

The role of gas lift as a means of producing oil is changed considerably by the restriction of production which is now practiced generally in flush fields. This paper discusses some of the changes in the conception of gas lift which are the result of present conditions of production.

The writer has discussed gas lift problems with a number of engineers. Grateful acknowledgements are due to all of them and especially to Clyde V. Temple who has given generously the benefit of his extensive experience. The writer wishes to thank James D. Wheeler for his assistance in the East Texas Field and for many useful suggestions.

Oil is produced naturally by flowing through wells under the impulse of the reservoir energy. Natural gas serves the purpose of decreasing the density of the fluid column in the flow string and so aids the reservoir energy in lifting the fluid column to the surface. The expansion of the gas, as it rises through the flow string, accomplishes work also, but the reservoir energy is the primary lifting force. As the reservoir pressure or the amount of natural gas, either or both, decline during production of the oil, a point is reached at which the reservoir pressure is inadequate to raise the fluid column to the surface and natural flow ceases. When this occurs, gas (including air) may be injected into the flow string. This gas decreases the density of the fluid column in the flow string until the reservoir pressure can, with the aid of the expanding gas, raise the lightened fluid column to the surface. This process is called gas lift. Of all the known means of artificial production of oil, gas lift is the most similar to natural flow.

When open tubing is used and operation is continuous, the system is called straight gas lift. Gas lift may be operated intermittently in wells of low liquid levels. A chamber with a standing valve may be used at the bottom of the well and there are a number of automatic devices for admitting the input gas at prescribed intervals.

A packer and a standing gas valve may be installed just above the producing formation with the tubing perforated above the packer and valve. In this case the casing itself serves as the chamber for intermittent gas lift. In producing small allowables under restricted production, either type of gas lift may be operated only a few hours per day. The term "periodic gas lift" is suggested for this type of operation which corresponds to the practice of "stop-cocking" wells flowing naturally.

Early Application of Gas Lift

The pioneer work in gas lift was done in lifting water, using air as the input gas. Many of the formulas used in gas lift, and particularly our ideas of minimum efficient flow velocities, are derived from experimental work with water. Many of these ideas should be modified in dealing with oil. It is customary to calculate the amount of gas necessary at a given pressure to lift a given volume of liquid. Oil contains dissolved gas which does part of the work and it is necessary to inject only the difference between the amount of gas accompanying the oil and the amount required. Our conception of necessary flow velocities is founded generally on mist flow. A considerable amount of gas is necessary to cause mist flow and wells flowing with moderate gas oil ratios generally flow slugs of foam alternating with slugs of gas. Probably foam flow predominates lower in the flow string under higher pressures. Foam may flow efficiently at rates of flow lower than those required to maintain mist flow. It should be borne in mind that oil forms a foam more readily than water.

Various authors[1] have discussed the importance of reservoir pressure and reservoir permeability as factors in problems relating to wells flowing naturally. These factors are equally important in problems relating to wells flowing by gas lift. The static liquid level in a well is determined by the reservoir pressure and the density of the liquid. The operating pressure of a well on gas lift is determined by the flowing pressure of the well at the point of injection of gas into the flow string. Since the flowing pressure of a well is determined by its rate of flow, its reservoir pressure and reservoir permeability, it is obvious that the permeability has an important bearing on the operating pressure of the gas lift. For a given depth and a given rate of flow, the greater the permeability the greater will be the flowing pressure. To operate at a given rate of flow and a given pressure, the greater the permeability the less will be the required submergence.

Classification of Wells—Gas Lift Characteristics

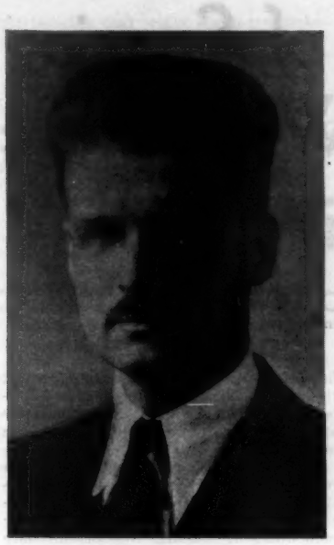
Consideration of reservoir conditions permits a general division of wells into classes, each class having its own general characteristcs in gas lift operations. In this discussion the term "high reservoir pressure" will mean pressure approaching the normal hydrostatic pressure for the depth of the reservoir and "low reservoir pressure" will mean pressure abnormally low for the given depth.

1. Wells having high pressure and high permeability will have high static liquid levels and will tend to maintain their liquid levels at moderate rates of flow. These wells are adaptable to operation by straight gas lift or by periodic straight gas lift with shallow submergence, low operating pressure and small input volume.

2. Wells having high pressure and low permeability are capable of attaining high liquid levels if given sufficient time. Such wells are operated generally at low liquid levels in order to maintain higher pressure gradients in the reservoir. Such wells are adaptable to intermittent gas lift with long cycles of operation. They are operated sometimes by intermittent gas lift regulated manually instead of by automatic devices and may be flowed one or more times per day. Wells of this class, if not operated at the proper intervals, will build up liquid levels above those of normal operation thereby increasing the submergence and requiring excessive pressures to start them flowing.

3. Wells having low reservoir pressure and high permeability will have low static liquid levels but will tend to maintain these liquid levels at moderate rates of flow. These wells are adaptable to operation by intermittent gas lift of short cycles of operation. They are also adaptable to straight or periodic gas lift as developed experimentally by Hayward[2] in the Seminole district. A well 3,200 feet deep, having a reservoir pressure of 66 pounds per square inch, was flowed at the rate of 80 bbls. per day using 1,748 cubic feet of input gas per barrel of oil. The input pressure was 11 pounds per square inch with 10-inch vacuum at the tubing head. The operation was continuous.

4. Wells having low pressure and low permeability have low static liquid levels and fill up slowly. They may be operated by intermittent gas lift of long cycles of operation and are sometimes regulated manually, being flowed once a day.



L. L. FOLEY

Effect of Water and Paraffin

Wells of all these classes may or may not produce water with the oil and may or may not have paraffin. The presence of water increases the necessary input ratios considerably as the water is a dead load and is not helped by its own dissolved gas as is the case with oil. Also more liquid must be lifted to produce a given amount of oil.

Paraffin may increase the input gas ratio indirectly. Some small wells would operate more efficiently with small tubing flow strings, but because of the presence of paraffin, 2 or 2½-inch tubing may be used to permit the operation of paraffin scrapers. Wells having low liquid levels may have less paraffin trouble than wells of higher liquid levels. Let us assume a well 3,500 feet deep, equipped with 7-inch A.P.I. casing and produced by gas lift with shallow submergence. If the static liquid level is 1,000 feet below the surface there will be approximately 95 bbls. of oil in the well. If the allowable production is 20 bbls. per day, it will take oil four or five days to rise to the top of the oil column and be raised to the surface. During this time it loses heat to the surrounding formations as it rises into zones of lower temperature. This loss of temperature encourages the deposition of paraffin in the flow string.

The use of intermittent gas lift leads to larger input gas ratios as it is necessary to exhaust the gas from the well at the end of each cycle in order to permit the oil to refill the well. Low reservoir pressure and permeability, therefore, are indirect causes of higher input ratios.

Wells of high permeability, operated under proration, are commonly flowed at rates equal to or less than the rate at which the reservoir is capable of putting oil into the well. In such wells the working liquid level will be relatively stationary from day to day but will fall slowly over longer periods of time as the reservoir pressure declines. Wells of low permeability are commonly produced at rates of flow greater than the rate at which oil comes into the well. In such wells the working liquid level falls continuously during each cycle, or period, of operation. This feature is especially pronounced when operating with periodic gas lift in wells of high pressure and low permeability which may fill up several hundred feet and be blown out once a day. The nature of the working liquid level, whether stationary or fluctuating, is important in planning for kickoff collars or flow valves.

Drilled collars, or jet holes, have been placed short distances below the static liquid levels in order to aid in starting the flow. By this practice, wells may be started at their operating pressure and the necessity of high starting pressures may be avoided. Gas will continue to go through the jet holes after the well has started flowing and the installation will be less efficient than it would be if all the gas went down to the working liquid level. A number of types of flow valves have been designed to admit gas into the flow string near the static liquid level until the well starts flowing and then to close to force all of the gas to travel the full length of the flow string. A series of these valves may be used if the submergence is considerable, or in intermittent gas lift if there is considerable range of liquid level during the cycle of operation. A valve should admit gas until the working liquid level is depressed below the next lower valve and should close when gas comes through the valve below. Some valves are designed to close when the flow of gas through them reaches a certain velocity or to close under a certain differential pressure. Others are designed to close by the velocity of flow of the fluid in the flow string. There are also valves combining both features, which is highly desirable.

Present Role of Gas Lift

Gas lift was adopted by the oil industry at a time of unrestricted production. The aim of production practice was to produce the greatest possible amount of oil per day and capacity was the primary consideration. Gas lift was used also to produce quantities of liquid above the ordinary capacity of pumping equipment. Reservoir pressures declined rapidly under capacity production and the effective life of straight gas lift installations was short. Gas lift was considered an intermediate stage between flowing and pumping and to justify gas lift economically it was necessary to balance the cost of the gas lift against production gained above the capacity of pumping equipment and also to balance the cost of gas lift against the interest and depreciation charges which would have been incurred by pumping equipment during the time gas lift was in operation. Overproduction of oil has led to restriction of production in flush fields during recent years and this restriction of production changes the role of gas lift materially. The severe restrictions which are common nowadays remove extra production as a factor in favor of gas lift. On the other hand, the restriction of production leads to much slower decline of reservoir pressures and prolongs the life of straight gas lift installations considerably. This gives gas lift the advantage of several years more through the saving of interest and depreciation on pumping equipment.

(Continued on Page 42)

*Paper before Petroleum Division, A.I.M.E., at Tulsa, October 13, 1934. Author's title: "Gas Lift and Restricted Production."

[1]M. Albertson and W. A. Schaeffer, Jr.: Control of Gas-Oil Ratios in the Yates Pool. Trans. A.I.M.M.E., Pet. Dev. and Tech. (1933) 316-331. G. H. Fancher, J. A. Lewis, and K. B. Barnes; Some Physical Characteristics of Oil Sands, Proc. Penn. Mineral Industries Conference, Penn State College Bull. 12 (1933) 65-171. T. V. Moore, R. J. Schilthuis, and William Hurst: The Determination of Permeability from Field Data. Amer. Pet. Inst., Prod. Bull. No. 21 (1933) 4-13. R. D. Wyckoff, H. G. Botset, M. Muskat, and D. W. Reed: Measurement of Permeability of Porous Media, Bull. Amer. Assn. Pet. Geol. (1934) 18, No. 2 161-190.

[2]John T. Hayward; Personal communication.

Comparison of Spacing Problems in Gas Drive With Those in Water Drive Pools

By JAMES O. LEWIS
Consulting Engineer, Tulsa*

J. O. LEWIS

In 1924 Cutler announced his well-known rule for oil well spacing[1]: "The recovery from wells of equal size producing under similar conditions in the same pool is proportional to the average distance that the oil moves to get to the well." In other words comparative ultimate recovery is proportional to the spacing distance.

Cutler recognized that this could not be an exact rule for there are other factors than distance involved in recovery, and he gave it as only a tentative rule approximately correct when used within the limits of ordinary variation in spacing. That the rule could not be exact is readily demonstrated.

Assume that at 800 feet spacing, recovery is 20 per cent.

At 400 feet spacing, recovery would be 40 per cent.

At 200 feet spacing, recovery would be 80 per cent.

At 100 feet spacing, recovery would be 160 per cent.

It is obvious that the reduction in recovery must be something less than in proportion to spacing distance. It is likewise apparent that the relative distance the oil must be moved is not the only important factor having to do with relative recovery. One of the reasons and probably the most important one, why recovery deviates from the rule is noteworthy. As a sand is depleted of its oil content, the gas, because of bypassing, becomes less and less effective as an agent for forcing the oil from the sand and consequently a larger and larger proportion of the gas energy is wasted in moving each additional barrel. This means that to recover the second 10 per cent of oil from a field there is required a considerably larger amount of energy than for the first 10 per cent and to recover a third 10 per cent requires a tremendously larger quantity of gas energy than the first 10 per cent as shown in Figure 1. Thus the gas energy saved in closer spacing is partly wasted in less effective expulsion as the percentage recovery is increased.

Later Haseman[2] and Phelps[3] advanced other formulas, but whether more correct or not, they differed so little from Cutler's rule when used within the usual limits in spacing distance that his simpler approximation can be considered sufficiently accurate for practical purposes. When it is sought to apply spacing rules it is found that there are so many uncontrollable and indeterminable factors (examples are the future price of oil and property lines) that it is useless to be very exacting. It is, however, important to understand the principles of spacing and to apply them correctly.

Fundamental Principles

In testing and applying these spacing rules, two of the fundamental principles have been surprisingly overlooked. Data have been presented purporting to test the rule which are meaningless, and Cutler's findings have been indiscriminately applied to conditions to which they have no bearing.

In the first place the influence upon recovery is relative; that is, for a specific set of conditions the ultimate recovery would be a certain per cent for each different spacing. But the ultimate productions measured in barrels for different porperties are influenced by many other factors than spacing. These include among other factors, sand thickness, porosity and permeability, the physical characteristics of the oil, the volume and pressure of the gas, the manner in which the well is finished and operated, and lastly time. Since all other factors than spacing vary widely, it cannot be expected that, in comparing actual production figures for properties differently spaced, there will be exact conformity to any rule for spacing. The engineer can only be careful in selecting data from properties where other conditions, including state of depletion, are near enough alike to justify comparison. It is a first principle for scientific research that, where there are several factors to be considered, only the one being investigated should be varied, the others being held constant.

Cutler endeavored to follow this principle by compiling enough data for a district so that the other factors tended to average out. His data from northeastern Oklahoma are particularly impressive and no one can reasonably doubt that under the conditions found there and up to the time his data were gathered, recoveries did approximate his spacing rule. But some of the other published data have not been convincing. Either there was too much dissimilarity in the other conditions to make comparisons possible or they were inadequately analyzed and presented by the author. Though it is unfortunate that in many instances comparisons cannot be made, this does not vitiate the rule.

The other fundamental is that Cutler's rule presupposes a definite and limited quantity of energy available to move the oil. Cutler explained the cause of his rule as follows: "This (tentative) rule seems to rest on the fundamental mechanical law that the energy required to move a fluid (either liquid or gas) through pipe, or analogous conductor, is proportional to the distance. Thus to force water twice as far through a pipe line requires twice the force." This explanation of course assumes the same velocity of movements and the rule is likewise true of all substances for no matter what the object moved, twice as much work is consumed to move it twice as far under like conditions.

This means that in a reservoir where there is a definite and limited amount of energy, to move a barrel of oil twice as far will use up twice as much of the available energy and therefore the recovery will be one-half. But if the energy is not limited, this rule does not apply; therefore the rule must be applied to fields which fit this presupposition. Only fields in which the gas originally dissolved in the oil is the sole motive force fit this requirement. The rule cannot be expected to apply even approximately to fields where water follows up the oil or steeply dipping sands with effective gravity drainage, or fields subjected to air or gas repressuring, water-flooding or mining or even to fields with large gas caps.

Controlling Oil Movement

In a field like East Texas where the oil is outlain by water under sufficient pressure and in sufficient volume to displace all of the recoverable oil, the relation between spacing and recovery has quite a different aspect. It is there not a problem of conserving energy by reducing the distance the oil is to be moved, but of controlling the movements of the oil and the water so as to minimize the oil that is trapped in the sand after the inflooding water has rendered the further operation of the wells uneconomic. In East Texas the spacing pattern and the manner of completing and operating the wells is more important than the average distance between the wells so far as ultimate recovery is concerned.

For guidance in the development and operation of such a field we can gain much from the experiments and experience in flooding at Bradford. It has been found there that best displacement of the oil from the sand pores is had within certain velocities varying, however, with the character of each sand and each oil. It has also been found that the greatest evil to combat is the irregular advancement of the water caused by unevenness in the sand and by uneven withdrawals from the wells. It has been found that it is best to space the wells closer together on lines parallel to the line of water advance and farther apart in the direction of advance.

Though we may follow the principle gained at Bradford in East Texas and in other highly permeable sand fields subject to natural flooding, we cannot follow Bradford spacing distance as conditions are too dissimilar. Everything in East Texas goes to prove that the sand is exceptionally permeable and therefore wide spacing could have been practiced there without loss of ultimate recovery, whereas Bradford is a tight sand field and water movements are so slow that close spacing has been adapted to obtain reasonably quick recovery. It is very clear that, under proper control, East Texas could have been drained with but a fraction of the wells and at a fraction of the recovery cost.

But the manner in which a field is operated may determine whether it will develop conditions to which Cutler's rule applies or not. Though the water surrounding a field may be sufficient to displace all the recoverable oil in it, if the rate of advance of encroaching edge-water is very slow and if the oil is produced faster than the water follows, spacing will follow Cutler's approximation at least until the water has reached the wells. It was demonstrated in the East Texas Field that at high rates of production, the water could not follow up as fast as the oil was withdrawn, and that parts of the field reached a stage where the oil was being moved by gas pressure independent of water pressure and that within a comparatively short time most of the field would have reached a similar state. When the field output was curtailed, the pressures built up and the field again came under a water drive condition.

In Seminole District

In the Seminole district, most of the properties went through a gas drive stage and later water followed up so that they ended their productive lives in a water drive stage. In some fields, wells near the edge of the pool have pumped out the encroaching water as fast as it advanced and the water drive has been indefinitely delayed. It has been claimed by many engineers that one well drilled on the top of a structure subject to water drive would theoretically drain the field. Other wells are necessary only to prevent entrapment and to speed up recovery.

Thus it can be seen that both natural and operating conditions determine whether a field will be a gas drive or water drive field and that a field may go through a gas recovery stage but end as a water drive field. Under the unrestricted development and operation of fields in the past, few fields were ever allowed to develop the water drive stage, but hereafter it may be expected that most fields naturally liable to water drive will be produced throughout in the water drive stage or will eventually pass to the water drive stage. The engineers should be able early in the life of a field to determine whether natural conditions are suitable to a water drive and spacing should be planned accordingly.

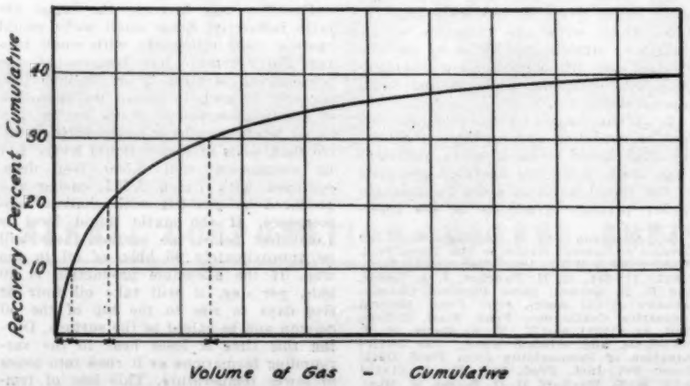


Fig. 1—Increase in the volume of gas needed to expel a unit of oil as sand is depleted. From laboratory experiments by the author

*Paper before Petroleum Division, the A.I.M.E., at Tulsa, October 12, 1934. Author's title: "The Spacing Problem in Gas Compared With Water Drive Pools."

[1]W. W. Cutler, Jr.: Estimation of Underground Oil Reserves by Oil Well Production Curves. U. S. Bur. Mines, Bull. 228 (1924) 89.

[2]W. P. Haseman: Formulas Developed for Proper Spacing of Wells, National Petroleum News (May 8, 1929) 59-65.

[3]R. W. Phelps: Analytical Principles of the Spacing of Oil and Gas Wells, Petroleum Development and Technology, A.I.M.E. 1928-1929, 90-103.

Other natural conditions where the energy available for oil recovery is not so limited as is assumed in Cutler's formula would be in a field with a large gas cap controlled to increase oil recovery, or in a field of steeply dipping sands where gravity was very active. In a thick sand with little laminations so that gravity drainage is very active, there would also be a marked deviation from Cutler's rule if the wells were closely spaced, which may explain why in some of the California fields more oil has been produced from town lot locations than could have been expected from Cutler's rule. Fields with some noncommunicating bodies of productive formation would also deviate from the rule.

Those fields to which Cutler's rule will apply must be considered not only in the light of his findings but there must also be taken into consideration the changes in operating methods that have come about in the last decade. First, however, the same conditions may be assumed and then the changes in conclusions that must be made not only for the progress that has taken place since, but for the further progress that may reasonably be expected in the future.

Two Aspects

Spacing in such a field must be considered from two aspects, the producer's profits and public interest. From the standpoint of public interest the closer the spacing the greater the recovery, yet if spacing is too close it will react against public interest through excessive production costs which must eventually be passed on to the consumer. This is shown in Figure 2 which parallels the findings of other engineers. The curves A and B show how the profits per acre decrease very rapidly from the optimum with overspacing, but very little for underspacing. They also show the tremendous importance of the price of oil on spacing. From the producer's standpoint, safety lies in the direction of wide spacing, for he will lose comparatively little profit if he spaces too far apart, but, if he spaces too closely, he takes a serious risk of not getting his investment back, especially in an unstable oil market. At $1 and 7½-acre spacing, the operator would net $5,000 per acre, but if the price dropped only 25 cents a barrel, he would fail by nearly $1,000 per acre of getting his investment back.

There has been much progress since Cutler's investigation in efficiency of utilizing the natural gas found with the oil, methods for increasing recovery are now being widely used and governmental control directed towards curbing output and the equitable allocation of recovery has become a fixed part of the industry. These changes all influence the spacing problem. As pointed out by Suman recent progress requires that we think of spacing in new terms.

Methods for increasing recovery, like pressure maintenance, repressuring, water-flooding and mining, do away with the fundamental of Cutler's rule—limited energy. Wherever any of these methods can be applied the problem changes, for we have a choice between increasing recovery by drilling more wells or by applying one of these methods. Figure 2 shows that though ultimate recovery can be materially increased by close spacing, the producer gets very little increase in profits. Though the recovery would be almost doubled by drilling a well to every 10 acres instead of one to every 40 acres, the profits at $1 per barrel would only increase from $5,400 per acre to $5,900 per acre, which hardly justifies the risk of loss that might come from a cut in oil prices. If this additional recovery could be made by repressuring at an additional cost of as much as 50 cents per barrel, the profits would be raised to $9,450 per acre.

It can of course be said that repressuring can also be applied to the 10-acre drilled property which would lessen the advantages indicated. Nor are we in a position to say that wide spacing plus methods for increasing recovery will get fully as high a recovery as close spacing plus methods for increasing recovery, though it seems clear, particularly in view of the progress in science that can be expected, that these methods indicate wider spacing. For the producer, it is safer and is more promising of profits; for the consumer it promises cheaper products now and should a shortage of oil ensue the unrecovered reserves can be made available at higher prices—inside locations can be drilled if other methods failed. It would seem good policy from both the producer's and public's interest to space widely during periods of abundance thus getting cheap oil while leaving a reserve in the ground against future famine.

Production Efficiency

Methods for increasing production efficiency also point toward wider spacing. If the oil-gas ratio can be cut in half, it will greatly increase though, as shown by Figure 1, it cannot be expected to double recovery. Figure 1 also indicates that as the percentage of recovery is increased by such means, the benefit of closer spacing is lessened, thus the more efficient the methods of utilizing the original gas pressure, the more widely can the wells be spaced. Deeper sands of higher pressure and consequently of greater per cent recovery, also make for wider spacing.

Moreover, close drilling induces conditions which are apt to nullify the purposes of increasing recovery. Suman has pointed out that the more wells drilled the more danger of wild wells or of improperly drilled wells that will cause damage underground. Fewer wells make it easier to apply scientific production methods, to regulate output and to equitably allocate production in a competitive pool. Fewer wells also tend to conserve the gas supply and to hold it underground until it can be used. How important this is, may be gained from the Oklahoma City Pool where the heat value of the gas—nearly all blown to the air—has almost if not equalled the heat value of the oil produced. In all types of pools it is better to err on the side of wide spacing.

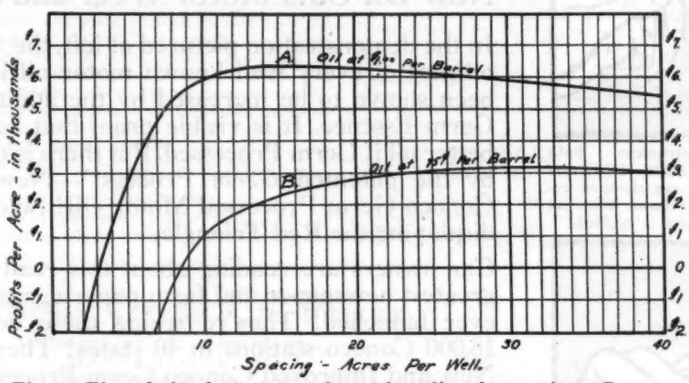


Fig. 2—The relation between spacing and profits. Assumptions: Recovery at 10 acres is 20,000 bbls. per acre; development cost $100,000 per well; average production expense, 20c per bbl.; Cutler's formula used. The effects of methods for increasing recovery are not included

Production control has also had a bearing on the spacing problem. One reason for close drilling in the past has been to speed up recovery, but with productions cut down to a small percentage of the well capacity this reason no longer exists. Unfortunately, the method of proration by potentials, as practiced in East Texas and Oklahoma City, has supplied a new reason which is the direct cause of the unnecessary overdrilling these two fields. When this unsound method of allocating production is done away with, it will permit wider spacing.

The advances in the technology of oil recovery all point toward wider spacing in future as do also governmental control in production. The progress being made towards unitization likewise will provide incentives to wider spacing. It also happens that nearly all recent fields of importance are subject to water drive and that curbing of production has made the water drives more noticeable and more effective. Deeper sands have stressed the economy of wider spacing and indicate that wider spacing will become more common in the future.

Conclusions

1. Cutler's, Haseman's and Phelps' spacing rules apply only to fields in which the expulsive force is practically limited to the gas found dissolved in the oil, and then only during the period of natural recovery.

2. Where the expulsive energy is not limited, as in fields subject to natural water drive, neither these spacing rules nor recovery data from fields to which they apply can be used. Recovery in water drive fields is more a matter of spacing pattern and of pool control directed toward minimizing the trapping of oil by encroaching water.

3. In fields of the first category to which artificial recovery methods are expected to be applied, such as pressure maintenance, repressuring, water-flooding, or mining, the wells can be spaced farther apart. The economic problem is whether the additional oil can be recovered most profitably by drilling more wells or by applying there supplemental forces.

4. Increasing production efficiency, proration, protection from drainage damages, deeper drilling, gas conservation and other present trends all tend toward wider spacing.

5. The costs of overdrilling cannot be rectified whereas any losses in underdrilling can usually be recouped. Artificial recovery methods can be applied, natural flooding may take place, progress in engineering may make up the difference and even inside locations can be drilled as afterwards found advisable. Safety lies in the direction of wider spacing.

Natural Gas Energy Should Be Conserved

(Continued from Page 34)

duced on gas lift. The pressure at present is about 500 pounds, under which condition there remains available a large amount of energy in the formation gas for lifting the oil, though insufficient for handling the complete lifting operation.

High-pressure gas furnished by gas wells and by compressor plants is supplying the deficiency. In order to take advantage of the conditions of pressure and of the gas associated with the oil during this period of proration, compressor plants are usually so constructed that the equipment can be employed to service a group of wells, the wells being produced in rotation by which means the cost of equipment is reduced to a minimum. In some instances a single small compressor unit is set up at the well, employing intake pressure at perhaps 300 pounds and compressing the gas to 400 or 500 pounds for lifting purposes. The intake is supplied from a large gasoline plant or from a gas well. In this way potentials can be taken with a small amount of equipment at the well, and the allowable can be made by these small units by operating only a portion of the month.

It should be mentioned that in these illustrations only rough approximations of figures are employed in cases where actual tests have not been made of flowing rates, draw-down curves, and quantity of gas dissolved and required, in as much as these figures are all influenced by various unknown factors. These unknown factors need not remain unknown if the operators will go to the comparatively small expense of obtaining the desired data. It is possible to take bottom hole samples at any time and have them analyzed; to obtain reservoir pressures at any time and to determine flow rates and gas ratios under different reservoir pressures. If the various data were observed from time to time it would be possible to approximate fairly closely the conditions that would obtain in later stages of the life of the field from extension of curves made from data obtained in earlier stages of the life of the reservoir.

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[5]Trans. A.I.M.E., Pet. Dev. and Tech. (1931), 188.

[6]The Oil and Gas Journal (June 8, 1933), 20.

[7]E. Wahlstrom: Development and Production Practice, Hobbs Field, New Mexico. Oil Weekly (April 24, 1933).

Foreign Field Drillers in Reunion at Petrolia

PETROLIA, Ontario, Oct. 6.—An interesting group of drillers from foreign fields met recently at Victoria Park, a favorite hangout of oil men at Petrolia, Ontario. The group included Jim McLister, home from Ecuador; John McLister of Windsor, who has drilled in Trinidad, Venezuela, Ecuador and the Argentine; W. J. McKeown of Toronto, who has worked in Sumatra, Borneo and Java; George Bryson of Petrolia, experienced in Burma, West Africa and Columbia; James Sanson of Petrolia, in Persia, Venezuela and Egypt; Frank Yerkes of Petrolia, in Trinidad, Venezuela and Antigua; David Holmes of Petrolia, in Trinidad, Colombia, Persia and Argentina; Angus Sutherland of Petrolia, in Alsace, Fort Norman and Turner Valley; and John Scott, aged 91, the dean of living Canadian drillers and now inspector of oil and gas wells for Ontario.

IMPERIAL MEN TRANSFERRED

TORONTO, Ontario. Oct. 6.—A number of transfers in the personnel of Imperial Oil Refineries, Ltd., have been announced.

G. L. Stewart, superintendent of the Sarnia plant, has been transferred to Toronto where he will succeed Charles B. Leaver as vice president.

J. Dean Bradley, assistant superintendent at the Sarnia plant, has been named superintendent; while C. E. Carson, superintendent at the Regina, Saskatchewan, plant since 1933, has been transferred to Sarnia as general superintendent. Floyd C. Lantz, superintendent of the refinery at Barranca-Bermeja, Colombia, succeeds Mr. Carson as superintendent at Regina. The changes become effective October 1.

Mr. Leaver, vice president, has been transferred from the Toronto office to New York City.

W. L. PICKENS INJURED

SAN ANTONIO, Tex., Oct. 6.—Injured in an automobile accident in Brownsville after flying there from Dallas, W. L. Pickens, 37, of the Gas Lift Sales Co., Dallas, was brought here by plane for treatment.

He suffered a compound fracture of his right leg, a broken left arm and bruises and cuts, but attendants at a hospital here said he would recover.

Can You Prove Your Oil is Better than the Others?

Conoco Dealers Can and Do!

1. Assembled instrument. Split bearings and shaft, lubricated with competitive oil, are clamped between "jaws" of instrument. With set screw extreme pressure is applied.

2. Crank is now used to turn shaft. Oil film ruptures and bearings "seize." Shaft extremely hard to turn. You can even hear the metal-to-metal contact!

3. Drop of Germ Essence is added to oil in bearing. Shaft can now be turned easily. Smooth, quiet movement—no seizing—no sound. Proof that Germ Processing increases oiliness and film strength of any oil!

This Machine Shows Prospects Why This New Oil Cuts Motor Wear and Saves Money

In the demonstration pictured at left, the film strength and oiliness of every well known motor oil in America have been shown to be increased by the addition of a drop of Germ Essence. It is visible proof that "any oil would be better oil if Germ Processed. But there is only one oil made by the patented *Germ* Process!"—New and Improved Conoco Germ Processed Motor Oil! Sold only at stations displaying the Red Triangle.

Car owners are reading about this really *new* oil in the greatest newspaper and farm paper campaign Conoco has ever launched! They're seeing these demonstrations at 18,000 Conoco stations in 40 states! They're switching to New and Improved Conoco Germ Processed Motor Oil!

In refinery sealed cans and in bulk

Conoco is backing jobbers and Red Triangle stations with *proof* for every statement made for this new motor oil. And Red Triangle stations are reaping results. National sales are 61.1% above last year. Individual stations report increases of *several hundred* per cent. Get the complete story. Let us explain our profitable sales plan. Write our nearest office today.

Every Wednesday Night
10:30 P. M., E. S. T., Continental Oil Company presents HARRY RICHMAN, JACK DENNY AND HIS MUSIC and JOHN B. KENNEDY, over N.B.C. network.

New and Improved

CONOCO
GERM PROCESSED
(PARAFFIN BASE)
MOTOR OIL

CONOCO

DIVISION OFFICES: Albuquerque, New Mexico; Butte, Montana; Chicago, Illinois; Denver, Colorado; Fort Worth, Texas; Great Falls, Montana; Kansas City, Missouri; Lincoln, Nebraska; New York, New York; Ponca City, Oklahoma; Richmond, Virginia; Salt Lake City, Utah.

CONTINENTAL OIL COMPANY

Persistent and Increasing Weakness in Chicago Tank Car Gasoline Market

By SPECIAL CORRESPONDENT

CHICAGO, Oct. 8.—Persisting and increasing weakness in the tank car gasoline market, further uncertainties over crude and the outbreak of a new epidemic of retail gasoline price cutting have been elements of the petroleum situation in this region in the past few days.

Offerings of low-priced East Texas gasoline continue to exercise a greatly unsettling influence. Jobbers are able to purchase what seem to be large quantities of material much below what might be considered the generally ruling market. While it is difficult to estimate satisfactorily the amount of gasoline available to the Middle West marketing trade of this nature, it is widely scattered among the resellers and additional offerings are still being made from refiners in that area. The offers from the more settled and established refining regions are quite small. On the whole, jobbers continue to restrict their purchases in the spot market. They are operating with stocks at the extreme minimum and do not appear likely to modify that policy.

Rural Conditions Better

Reports as to consumption vary. It probably is running in good relation to a year ago. Some of the major companies are pushing a campaign advocating motoring to the American Legion convention at Miami, Fla., this fall. It is hoped this may prove some slight stimulant to consumption. In the rural sections of the Middle West conditions appear to be mixed, but there is not generally such widespread pessimism over the position of agriculture as two months ago.

Considerable doubt exists in the trade here that the question of margins, for either jobbers or dealers, can reach some satisfactory or basic solution soon. It had been hoped that a definite position on this problem might be established by the first of October, so that the "armed truce" or moratorium might be effective for October and that November 1 might see establishment of the new and reduced scale of margins to dealers. It is believed to be felt in administration circles that so long as the East Texas situation remains as it is, there is little chance for more generous margins anywhere in the picture.

Jobbers Hostile

Decidedly hostile attitude of jobbers to the oil code, in view of lack of enforcement of its provisions, is reported. Numerous groups are openly announcing their renunciation of the code and their establishment of trade regulations of their own. Conditions are thus becoming more and more difficult to follow in the various regions. Price cutting in the retail market is increasing, especially at many small points, with Chicago and southern Indiana particularly sore spots. The old question of unbranded gasoline price differentials is coming to the front in numerous sections, such as Chicago, where it is the point of contention.

Heating Oils

The weakened price position of the heating oils had something to do with the kerosene market. The buyers of distillates, gas oils and zero fuels are not nearly so interested in acquiring material as a few weeks ago. Offers are increasing. The mild weather probably is an influence.

Kerosene

Kerosene is quite dull. The current farm demand shows little improvement.

Heavy Fuels

Heavy fuels are still in the doldrums. There is little of the anticipated heavy industrial demand. Offerings are ample. The owners of industrial gas oil are more willing to accept business at lower prices.

Crude Oil Prices

(Continued from Page 27)

Effective September 20 in Salt Flat by Shell Petroleum Corp.

Rocky Mountain States

Ilex, light (Sept. 29, 1933)	$.96
Ilex, heavy (Sept. 29, 1933)	.90
Florence, Colo. (June 17, 1933)	.80
Fort Collins and Wellington, Colo. (June 17)	(See Salt Creek prices)
Big Muddy (Sept. 29, 1933)	1.01
Frannie, light (May 1, 1934)	.76
Frannie, heavy (Sept. 29, 1933)	.62
Salt Creek and LaBarge (Sept. 9, 1933)	See Stanolind Mid-Continent price schedule
Grass Creek, light (Sept. 29, 1933)	1.18
Grass Creek, heavy (Dec. 15, 1932)	.45
Elk Basin (Sept. 29, 1933)	1.18
Rock Creek (Sept. 29, 1933)	1.02
Dutton Creek (July 8, 1933)	See Mid-Continent gravity prices
Lance Creek (Dec. 16, 1932)	.52
Poison Spider (Mar. 5, 1931)	.70
Hudson (June 2, 1931)	.65
Lander (Mar. 5, 1931)	.40
Rex Lake (Feb. 22, 1930)	1.10
Osage	1.08
Lost Soldier (Sept. 30, 1933)	.88
Hamilton Dome:	
Below 18° (July 1, 1934)	.52
18° and above (July 1, 1934)	.62
Torchlight (Sept. 29, 1933)	1.18
Greybull (Sept. 29, 1933)	1.18
Pondera	1.15
Sunburst (Sept. 29, 1933)	1.35
Cat Creek, Montana	1.07
Hogback (Sept. 29, 1933)	1.11
Lea County, N. Mex. (Sept. 29, 1933)..	.75
Maljamar (Sept. 29, 1933)	.70
Artesia-Jackson (Dec. 1, 1933)*	.75

Note—Salt Creek, Torchlight, Elk Basin, Grass Creek, Frannie, Greybull, Hogback and Ilex by Stanolind Oil & Gas Co. Elk Basin, Grass Creek light, Big Muddy, Rock Creek and Sunburst by Ohio Oil Co. Lost Soldier posted by Producers & Refiners Corp. Artesia, Jackson and Maljamar posted by Continental Oil Co. Lea County, effective September 29, 1933, by Humble Oil & Refining Co. and other buyers; Fort Collins, Wellington, Orchard, Florence, Big Muddy, Cat Creek, Rattlesnake and Table Mesa by Continental Oil Co. Osage posted by Arro. Hamilton Dome, Wyo., by Stanolind Oil & Gas Co.

*Continental Oil Co.

North Louisiana and Arkansas

Smackover, Ark. (all grades)	$.76
Tullos, Urania, La. (Jan. 13, 1934)	.87
Nevada, Ark. (Sept. 29, 1933)	.80
East El Dorado (Sept. 29, 1933)	.76
Converse, La. (Mar. 17, 1934)	1.03
Elm Grove, La. (Sept. 29, 1933)	.75
Holly, La. (Nov. 17, 1934)	1.03
Pleasant Hill, La. (Mar. 17, 1934)	1.03
Zwolle, La. (Mar. 17, 1934)	1.03
Champagnolle, Ark. (Mar. 17, 1934)	.81
Lisbon, Ark. (Mar. 17, 1934)	1.03
Stephens, Ark. (Sept. 29, 1933)	.76
Urbana, Ark. (Mar. 17, 1934)	.80
Other fields	(See gravity table)

Note—Smackover: Effective September 29, 1933, Texas Co., Magnolia Petroleum Co., Standard of Louisiana, Louisiana Oil Refining Corp., Gulf Refining Co. and Phillips Petroleum Co. East El Dorado posted by Magnolia Petroleum Co. and Gulf Refining Co., Nevada by Standard Oil Co. of Louisiana. Urbana posted by H. L. Hunt, Inc., and Louisiana Oil Refining Co. Converse, Holly, Zwolle and Urbana by Standard Oil Co. of Louisiana; Elm Grove by Simmons Oil & Refining Co.; Pleasant Hill by Standard Oil Co. and Magnolia Petroleum Co.; Champagnolle by Standard Oil Co. and Lion Oil & Refining Co.

Eastern States

TIDE WATER PIPE CO.
(Effective May 1, 1934)

Bradford, Pa.	$2.55
Allegheny, N. Y.	2.55

SOUTH PENN OIL CO.
(Effective May 1, 1934)

Pennsylvania Grade Oil in National Transit Lines (Bradford Field)	$2.55
Pennsylvania Grade Oil in Southwest Pennsylvania Lines	2.22
Pennsylvania Grade Oil in Eureka Pipe Line lines	2.17
Pennsylvania Grade Oil in Buckeye Pipe Line lines	2.07
Corning Grade Oil in Buckeye Pipe Line Co.'s lines (Oct. 2, 1933)	1.32

PENNZOIL CO.
(Effective May 1, 1934)

Pennsylvania Grade Oil in National Transit Lines:	
Group A (Includes Cochran, Franklin, Hamilton and Doolittle districts.)	$2.47
Group B (Includes Titusville district.)	2.46
Group C (Includes Turkey and Tidioute districts.)	2.45
Group D (Includes Bear Creek and Porkey districts.)	2.44
Group E (Includes Elderaea, Bull Creek, Rough Run, Carbon, Dipner, Bredin, McJunkin, Jameson, Kennerdell, Emlenton, Tiona, Lacey and Kinzua districts. Price depends on length of pipe line haul to plant at Oil City.	2.42

PURE OIL CO.
(Effective May 1, 1934)

Cabin Creek, W. Va.	$2.17
Bradford Hollow, W. Va.	2.17
Kelly Creek, W. Va.	2.17

CREW-LEVICK CO.

Oil City-Titusville	$2.47

Middle Western States

OHIO OIL CO.
(Effective September 29, 1933)

Lima	$1.00
Illinois (Jan. 5, 1934)	1.13
Princeton, Ind. (Jan. 5, 1934)	1.13
Plymouth	Shut in
Western Kentucky (May 26, 1934)	1.00
Midland, Mich. (Sept. 30, 1933)*	1.00
Oceana, Mich. (Oct. 5, 1933)	.90
Somerset, Ky. (Sept. 30, 1933)	1.13

*Posted by Pure Oil Co. Producers Pipe Line Co. pays 5 cents per barrel over Pure Oil Co.'s posted price. Somerset, Ky., crude purchased by Ashland Refining Co., Ashland, Ky., and posted price includes premium. Oceana posted by Old Dutch Refining Co. and Naph-Sol Refining Co.

Canada

Ontario (September 9, 1933):	
Petrolia*	$2.10
Oil Springs	2.17
Turner Valley (May 21, 1934):†	
Clear naphtha	$2.55
Discolored naphtha	2.37
Crude oil, 50 gravity	2.10
Crude oil, 45 to 49.9	2.07
Crude oil, 40 to 44.9	1.80

*Imperial Oil, Ltd. †Imperial Oil, Ltd., and Regal Oil & Refining Co.

Mexico

Panuco*	$0.98

*F.o.b. ship, based on August transactions and exclusive of production and export taxes and bar dues.

California Crude Oil Prices

STANDARD OIL CO. OF CALIFORNIA
(Effective September 6, 1933)

For current purchases of crude oil at the well (unless otherwise specified). (All gravities above those quoted take highest price offered in that field.)

Gravity—	Long Beach	Seal Beach, Alamitos Heights	Huntington Beach	Inglewood	Playa del Rey	Olinda, Brea Canyon	Athens-Rosecrans	Torrance	Richfield	Whittier, La Habra	Montebello	Santa Fe Springs	La Habra-Coyote	Midway-Sunset, Elk Hills, Buena Vista Hills	Lost Hills	Coalinga	Coyote
14-14.9	$.65	$.65	$.65	$.65	$.65	$.65	....	$.65	$.65	$.65	$.65	....	$.65	$.57	$.57	$.57	$.65
15-15.9	.65	.65	.69	.69	.66	.69	....	.66	.65	.65	.65	....	.65	....	....	....	.65
16-16.9	.66	.65	.72	.72	.69	.73	....	.69	.67	.68	.65	....	.65	....	....	....	.65
17-17.9	.69	.65	.75	.76	.72	.76	....	.72	.70	.71	.65	....	.68	....	....	....	.68
18-18.9	.72	.65	.78	.80	.76	.79	....	.76	.74	.74	.65	....	.71	.61	.61	.59	.71
19-19.9	.75	.65	.81	.83	.80	.82	....	.78	.78	.78	.65	....	.74	.64	.65	.62	.74
20-20.9	.78	.68	.83	.87	.83	.85	....	.81	.82	.81	.66	....	.78	.67	.69	.65	.78
21-21.9	.81	.72	.86	.90	.87	.88	....	.83	.85	.84	.69	$.72	.81	.70	.73	.68	.81
22-22.9	.84	.76	.89	.94	.90	.92	....	.85	.89	.87	.72	.76	.84	.73	.76	.72	.84
23-23.9	.88	.81	.92	.97	.94	.95	$.82	.89	.92	.90	.76	.79	.87	.77	.79	.75	.87
24-24.9	.91	.85	.95	1.01	.97	.98	.86	.92	.97	.93	.80	.83	.90	.81	.82	.78	.90
25-25.9	.94	.89	.98	....	1.00	1.01	.90	.95	1.00	....	.85	.87	.93	.85	.85	.81	.92
26-26.9	.97	.93	1.01	....	1.04	1.04	.94	.98	1.04	....	.89	.90	.96	.89	.88	....	.96
27-27.9	1.00	.98	1.04	....	....	1.07	.97	....	1.08	....	....	.94	.99	.92	.91	....	.99
28-28.9	1.03	1.02	1.07	....	....	1.10	1.01	....	1.11	....	....	.98	1.02	.97	.94	....	1.02
29-29.9	1.06	1.05	1.09	....	....	....	1.04	....	1.15	....	....	1.01	1.05	1.01	.97	....	1.06
30-30.9	1.09	1.10	1.12	....	....	....	1.08	....	....	....	....	1.05	1.09	1.05	1.00	....	1.09
31-31.9	....	....	....	....	....	....	1.12	....	....	....	....	1.08	1.12	1.09	....	....	1.12
32-32.9	....	....	....	....	....	....	1.15	....	....	....	....	1.12	1.15	1.12	....	....	1.15
33-33.9	....	....	....	....	....	....	....	....	....	....	....	1.16	1.18	1.17	....	....	1.18
34-34.9	....	....	....	....	....	....	....	....	....	....	....	1.19	1.21	....	....	....	1.21
35-35.9	....	....	....	....	....	....	....	....	....	....	....	1.23	....	....	....	....	....
36-36.9	....	....	....	....	....	....	....	....	....	....	....	1.26	....	....	....	....	....
37-37.9	....	....	....	....	....	....	....	....	....	....	....	1.30	....	....	....	....	....
38-38.9	....	....	....	....	....	....	....	....	....	....	....	1.34	....	....	....	....	....

Additional Standard Oil Quotations

Mountain View—Effective July 3, 1934, the following are the prices of the Standard Oil Co. of California for its current purchases of crude oil at the well in the Mountain View Field: 14 to 19.9 degrees, 57 cents; 20-20.9, 58 cents; 21-21.9, 59 cents; 22-22.9, 61 cents; 23-23.9, 62 cents; 24-24.9, 66 cents; 25-25.9, 69 cents; 26-26.9, 72 cents; 27-27.9, 75 cents; 28-28.9, 78 cents; 29-29.9, 81 cents; 30-30.9, 84 cents; 31-31.9, 87 cents; 32-32.9, 90 cents; 33 degrees and above, 93 cents.

Elwood Terrace—F.o.b. ship, 33 degrees, $1.03; 34 degrees, $1.06; 35-35.9, $1.09; 36-36.9, $1.12; 37 degrees and over, $1.15.

Newhall—14 degrees and over, 57 cents.

McKittrick and Kern River—14 degrees and over, 57 cents.

Wheeler Ridge—14 to 17.9 degrees, 57 cents; 18-18.9, 58 cents; 19-19.9, 61 cents; 20-20.9, 64 cents; 21-21.9, 67 cents; 22-22.9, 70 cents; 23-23.9, 73 cents; 24-24.9, 76 cents; 25 degrees and over, 79 cents.

Kettleman Hills—33-33.9 degrees, 93 cents; 34-34.9, 96 cents; 35-35.9, 99 cents; 36-36.9, $1.02; 37-37.9, $1.05; 38-38.9, $1.08; 39 degrees and over, $1.11.

The Texas Co. posted in Shiells Canyon, South Mountain and Santa Paula as follows: 14 to 17.9, 57 cents; 3 cents added for each degree up to and including 26-26.9 degrees at 84 cents; then 4 cents added for each degree up to and including 39 degrees and over at $1. Company posts Standard Oil Co.'s Montebello prices in Montebello and North Whittier, and posts Standard Oil Co. prices in Signal Hill, Alamitos Heights, Huntington Beach, Torrance, Richfield and Santa Fe Springs, all effective September 6.

General Petroleum Co. posts Standard Oil Co. prices in Athens, Rosecrans and Signal Hill; Alamitos Heights up to 26-26.9; Santa Fe Springs up to 35-35.9; Richfield up to 25-25.9; Brea Canyon and Olinda up to 25-25.9, and Torrance up to 25-25.9.

Union Oil Co., effective September 6, posts same price as Standard Oil Co. in all fields in which both purchase, excepting that in Athens-Rosecrans, Union Oil Co. posts 21-21.9, 72 cents, and 33-33.9, $1.18; 34-34.9, $1.21, and 35-35.9, $1.24.

Associated Oil Co., effective September 6, posted same prices for the same grades as Standard Oil Co. of California, excepting that in some fields its gravity scale stops as follows: Huntington Beach, 26 degrees and over; Seal Beach and Alamitos Heights, 26 degrees and over; Coyote Hills, 23 degrees and over; Richfield, 25 degrees and over; Torrance, 25 degrees and over; Inglewood, 24 degrees and over; Santa Fe Springs, 35 degrees and over; Midway-Sunset, Elk Hills, Buena Vista Hills, 30 degrees and over. Also Associated pays 52 cents for oil of 11 to 13.9 gravity in McKittrick, Kern Front, Kern River, Midway-Sunset, Elk Hills, Buena Vista Hills and Coalinga.

Changed Conceptions of Gas Lift to Pools

(Continued from Page 37)

If gas lift is used to supplement reservoir energy, and is used to lift allowable production of a few barrels per day, economy of installation and operation becomes the primary consideration. The planning of gas lift installations under such conditions is a quite different problem from planning gas lift installations for unrestricted production. In planning a gas lift installation for restricted production, consideration of economy makes it desirable to use the lowest possible pressures and input ratios. The use of low pressures and small volumes will decrease the requirements of compressor plants and distribution lines, thereby reducing installation costs. The use of low pressures and small volumes will decrease also the power requirements which is especially important if electric power is used. Straight gas lift fails when the reservoir pressure becomes less than the operating pressure necessary to flow the oil and gas to the surface, therefore the lower the operating pressure, the longer will be the effective life of a straight gas lift installation. The input gas tends to evaporate the lighter fractions from the crude oil so it is desirable to use the smallest possible input volumes in order to maintain the gravity of the crude oil produced.

Operation at low pressures may be achieved by using shallow submergence of the flow string and using flow valves or jet holes to aid in starting the flow. Small input ratios may be achieved by installing flow strings properly designed for the rates of flow to be used. For greatest efficiency each well must be studied and regulated to operate at the proper input volume. Each given well and flow string has its characteristic maximum productivity for a given submergence and a minimum amount of input gas for this amount of production. Increasing the amount of input gas above this minimum will not increase the production but will merely increase the input ratio and may actually decrease the amount of oil produced.

The greatest economy in gas lift operation is achieved in connection with natural gasoline plants. The gasoline plant furnishes the gas gathering system which is an important item of cost in many gas lift systems. The discharge pressure of the residue gas is sometimes sufficient for gas lift operation. The gasoline plant may furnish the first stage or even all of the compression which decreases or eliminates the plant and power requirements of the gas lift installation. Each barrel of oil produced contributes its dissolved gas and the gas which may be recycled helps to maintain the gas supply.

Gas Lift in East Texas

The East Texas Field offers an excellent opportunity for the use of gas lift as outlined above. The production of the field is restricted to a fraction of its capacity, the daily allowable production ranging from 20 to 38 bbls. per well. The decline of reservoir pressure is slow and the life of the field will be long. The slow decline of reservoir pressure will allow long life for gas lift installations. The oil is undersaturated with gas and gas does not begin to come out of solution until the pressure drops to approximately 750 pounds per square inch. The reservoir pressure is now approximately 1,220 pounds per square inch and is declining at a rate of approximately 80 pounds per year so we may expect the present formation gas oil ratio to be maintained for a number of years. Gas may be recycled, which will prolong the supply of gas available for gas lift. One natural gasoline plant in East Texas finds that its gas from flowing wells averages 2½ gallons per 1,000 feet while gas from the wells on gas lift averages 1.74 gallons per 1,000 feet, so the gas is not seriously impoverished by the use of gas lift.

There are three types of wells in the East Texas Field in which artificial lift is required.

1. Wells in which the reservoir pressure has fallen below the pressure required to start the wells flowing after "stop-cocking." These wells would flow steadily at low rates, but are produced periodically at higher rates of flow because of paraffin trouble. Wells of this type are common on the east side of the field.

2. Wells producing water in such quantities that the dissolved gas accompanying the oil is insufficient to raise both the oil and the water. Wells of this type are found on the west side of the field and are increasing in number.

3. Wells penetrating sand of very low permeability.

Three Classifications

Gas lift has been tried in the East Texas Field in wells of all three classifications. A group of wells of the first type are operated at 250 to 300 pounds per square inch input pressure with an average input ratio of 500 cubic feet per barrel. The operator believes the ratio could be made lower but the gas supply is ample and they are satisfied with this ratio. One well in the same vicinity is an example of Type 3. This well, equipped with flow valves and with a packer and standing valve above the pay, produces 5 bbls. per day with 3,000 cubic feet per barrel input gas at the same 300 pounds per square inch pressure. It is operated manually and is flowed once a day. It is now producing 3 bbls. per day with 6,000 cubic feet per barrel input ratio. If we allow 5 cents per 1,000 feet for compression cost, the cost of the gas lift is 30 cents per barrel, or 90 cents per day for the well, which is not excessive for a 3-bbl. well. In this particular case residue gas from a gasoline plant is used which would be blown into the air if not used for gas lift. The cost of placing this well on gas lift, including gas lines and flow valves, was approximately one-third the cost of pumping equipment. This well shows that wells of Type 3 may be operated economically on gas lift, also that wells of Type 1 may be produced to depletion by gas lift.

Several wells of Type 2 have been placed on gas lift using gas from the lease fuel line which carries about 250 pounds per square inch pressure. Drilled collars were installed a short distance below the static liquid level and shallow submergence was used. The use of shallow submergence in gas lift in these wells corresponds to the pumping practice known as "skimming" which is used sometimes in wells making water. Input ratios as low as 200 cubic feet per barrel were achieved in a well making 25 per cent water. As the reservoir pressure decreases it is necessary to lower the tubing in order to keep the first drilled collar below the static fluid level. If the drilled collars are too high, the input gas ratio will be increased. The input gas per barrel of total liquid will be increased as the percentage of water increases and may be as high as 1,000 cubic feet or more per barrel. Wells of Type 2 have been known to make up to 95 per cent water with high reservoir pressures. These wells may be produced to depletion by straight gas lift with shallow submergence.

A well of Type 3, making oil only, was cited above. Gas lift has been installed in another well where the permeability is low and the well also makes water. The static liquid level of this well depends upon the time allowed for filling the hole but is generally about 2,000 feet. The well is flowed once a day. Several arrangements of drilled collars and flow valves have been tried in this well. The well will flow its oil with one-sixteenth inch holes in the drilled collars in the 2½-inch tubing string and operating at 250 to 300 pounds per square inch input pressure, but in order to handle the water satisfactorily it has been found necessary to use one-eighth inch gas ports and 400 pounds per square inch input pressure. The best input ratios achieved in this well to date have been 1,000 to 1,500 cubic feet of gas per barrel of total liquid.

An experiment was performed in an east side well using a portable compressor and input air. The static oil level in this well was at 1,000 feet. Tubing 1¼ inches in diameter was run inside the 2½-inch flow string and air was forced down the 2½-inch tubing. A one-sixteenth inch jet hole was installed 50 feet below the static oil level. The gas passing through the jet hole started the well flowing at 120 pounds per square inch input pressure. With 800 feet of submergence the well operated at 140 pounds per square inch input pressure and the production settled to 3 bbls. per hour. With 1,900 feet of submergence the well operated at 435 pounds pressure and settled to 7 bbls. per hour. Input ratios as low as 98 to 150 cubic feet per barrel of oil were used in this experiment. Increasing the amount of input air did not increase the amount of oil.

Planning Extensive Use

A number of gas lift installations have been made in the East Texas Field, some of them on small properties. Shaw[3] cites an example of an installation on a lease having nine wells. The installation cost, including $400 per well for flow valves, was $1,344 per well. Including capital charges, labor and other expenses, Shaw calculates the lifting cost to be 5 cents per barrel at 33-bbl. allowable production.

One major operator, after experimenting with several wells for about a year, is planning an extensive use of gas lift. The residue gas from a gasoline plant is discharged at 300 pounds per square inch and the gas lift is operating at this pressure. A distribution system has been installed and flow valves are placed in the flow strings of each well. The cost of this installation, including flow valves, is probably about $500 to $700 per well, depending on the make and the number of flow valves used. Another company has several wells on gas lift using gas from gas wells. The lease fuel system is used as a distribution system and a pressure of 250 pounds per square inch is carried in the line. As more wells require artificial lift, it may become necessary to enlarge the distribution system. This company plans to use residue gas which is discharged from a gasoline plant at 100 to 125 pounds per square inch and boost it to the necessary operating pressure. In this case the gasoline plant will furnish the first stage of compression.

An interesting development has occurred in the past few months. Two wells were completed in areas of relatively low pressure and it was known that the wells would require artificial lift initially. These wells were drilled into the oil sand with rotary equipment. While the drilling fluid was still in the hole, the tubing strings and flow valves were run and the wells equipped for production. The rotary mud was washed out with water and the water washed out with oil. The gas was then turned into the annular space and the wells were brought in by gas lift.

For most efficient operation, each well and each flow string is a separate problem. Reservoir pressures, oil levels, the amount of formation gas and other factors may change during the life of the well, requiring changes in the flow string for most efficient operation. The changes necessarily involve labor and other expenses. It is possible, by using drilled collars and flow valves, to design a flow string which will work under all conditions and in a given field although it may not be the most efficient for a given well. In deciding which general policy to follow compression costs and the abundance or scarcity of available gas must be balanced against the cost of changes.

In conclusion, gas lift is the most natural of the artificial means of producing oil. It may be used economically under restricted production, especially in connection with gasoline plants. Many wells which are now being equipped for gas lift will be produced to depletion by that method. It is possible that under restricted production, gas lift may be assuming its proper role and achieving its greatest usefulness in the oil industry.

[3] F. Shaw: Air Lifting Oil to Take Advantage of Existing Pressure in East Texas. Oil Weekly (July 9, 1934), 19-21.

East Texas Waiting for Federal Action

(Continued from Page 8)

vestigation for the Interior Department, and Charles Fahy, vice chairman of the Petroleum Administrative Board, in charge of the field forces, has any effect on shipments of crude and refined products in interstate traffic, remains to be seen, operators retaining skeptical minds until they see some definite results accomplished by the Federal forces.

Open Storage

A number of refiners in the field have been running crude oil to open storage near their plants. The Railroad Commission has regulations prohibiting this practice because of the waste involved and has brought suit in the Travis County District Court for injunctions to prevent open storing of crude. The hearing on the injunctions will be held October 12. Storage of more than 1,250,000 bbls. of oil in the Gladewater and Kilgore refining areas was alleged in the petitions. If the commission obtains injunctions there is sure to be a reflection shown in runs to refineries and shipments of refined products, this oil in storage having much to do with the present overproduction and refining situation.

The applications for permits of several pipe line companies operating in the field have been taken under consideration by the Railroad Commission, with the possibility permits to continue to do business in the field may not be given if companies have not conformed to the regulations of the commission in regard to the transportation of "hot oil." If permits are withheld from pipe line companies that have transported, or are transporting such oil in the field, and the commission can hold its position in the courts, it will have won a singular victory striking at the heart of the "overproduction" and transportation troubles.

Several cases are to come up in the Gregg County courts this week in regard to overproducing, by-passing and the transportation of oil in that part of the field. However, these suits generally draw only fines, if any punishment is meted out at all, and the operators scoff at the penalties.

During the week a considerable number of cars of oil, billed as crude tops, were tested and found to be nothing but crude oil. This method of evasion of the commission's rules has been going on for some time, the commission having power to deal only with crude oil shipments until December 25 when the new bill dealing with shipments of refined products takes effect.

Assistant Attorney General Elbert Hooper has been appointed to fill the place left vacant at Longview by the resignation of Neal Powers who is going into business with Raymond Allred at Tyler, Tex. Mr. Powers has represented the State at Longview for about two years.

Federal Tender Committee

It has been suggested that one of the most effective committees the Federal Government could set up in the field would be a tender committee, such as the Railroad Commission's tender committee, which scrutinizes all tenders of oil or refined products offered for shipment. Operators and refiners would hesitate in signing false tenders checked by the Government's committeemen. Such tenders would deal only with movements interstate, and a Federal tender order, similar to the commission's tender order would be necessary. A conference of Federal attorneys and major pipe line representatives is to be held in the field on October 9 to discuss such an order and committee.

The next week or two will be closely watched to note the possible change in conditions, important meetings taking place in that time, a probable change in the activities of the Federal forces, with the possible setting up of the tender committee by the Government, and other factors entering to bring about better results.

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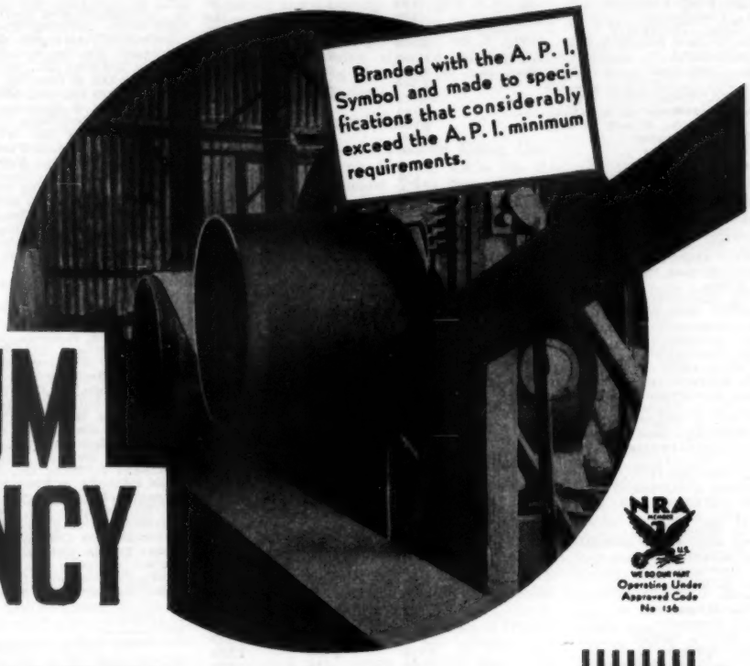

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Mid-Continent Crude Runs to Remain High in October

(Continued from Page 16)

EAST TEXAS

Company and location—	Daily capacity	Aver. daily runs October	Aver. daily runs September
Acme Refining Co., Gladewater	700	700	300
Adams Refining Co., Big Sandy	1,000	770	950
Archer Refining Co., Gladewater	1,000	(*)	(*)
Arrow Refining & Producing Co., Overton	5,000	2,800	2,400
Artex Refining Co., Arp	1,600	1,300	1,600
Aviation Refining Co., Kilgore	200	(*)	(*)
Bartlett Refining Co., Kilgore	200	(*)	(*)
Beacon Oil & Refining Co., Henderson	4,500	2,500	2,200
Blue Ridge Oil Co., Gladewater	1,500	1,320	1,000
Blackstone Refining Co., Overton	3,000	2,000	1,200
Bradley Refining Co., Kilgore	1,200	1,200	1,000
Calcul Refining Co., Gladewater	600	600	550
Carnation Refiners Corp., Gladewater	1,100	1,100	800
Century Refining Co., Friars Switch	2,300	2,000	2,300
Chief Refining Co., Gladewater	1,500	1,150	700
Culver Refining Co., Gladewater	2,100	2,100	1,800
Danciger Refineries, Inc., Longview	10,000	2,000	(*)
East Texas Refining Co., Longview	10,000	2,000	7,500
Foshee Refining Co., Gladewater	1,500	350	(*)
Friar Topping & Refining Co., Friars Switch	1,500	1,050	50
Gilliland Refining Co., Gladewater	3,500	3,350	3,500
Gilmer Refining Co., Gladewater	500	(*)	50
Gladetex Refining Co., Gladewater	700	700	190
Godlin Refining Co., Gladewater	350	(*)	(*)
Goodson Refining Co., Gladewater	500	(*)	5
Humble Oil & Refining Co., Neches	5,000	1,300	1,400
Hunter & Knox Refining Co., Reeds Switch	100	(*)	100
Ideal Refining Co., Gladewater	750	100	(*)
Illinois Refining Co., Kilgore	570	570	100
Imperial Refining Co., Kilgore	2,000	540	(*)
Johnson Refining Co., Kilgore, No. 1	1,400	1,350	600
Ken. Refining Co., Angus	4,000	(*)	(*)
Keystone Refining Co., Gladewater	2,300	2,300	1,400
Kilgore Reclamation Co., Kilgore	2,000	310	500
Kilgore Refining Co., Kilgore	3,000	1,200	2,000
K-Tex Refining Co., Kilgore	500	500	60
L. & G. Refining Co., Gladewater	400	330	100
Lake Refining Co., Gladewater	2,000	1,800	1,600
Lapren Refining Co., Kilgore	1,500	1,430	1,100
Lindsey Refining Co., Gladewater	2,500	2,200	1,600
Locke Refining Co., No. 1 Gladewater	1,500	1,500	300
Locke Refining Co., No. 2, Gladewater	1,500	1,500	1,000
London Topping & Refining, Overton	250	240	20
Lone Star Refining Co., Gladewater	2,700	2,700	1,900
Longregg Refining Co., Kilgore	2,000	70	(*)
Lotus Refining Co., Gladewater	1,500	1,200	50
Magnolia Petroleum Co., Corsicana	5,000	3,000	3,000
Master Petroleum Co., Waco	1,000	400	400
McMurray Refining Co., Arp	2,000	2,000	800
Minerva Refining Co., Minerva	2,000	220	220
Model Oil & Refining Co., Reeds Switch	600	580	250
Ocean Refining Co., Kilgore	3,000	2,740	2,900
Oil Refineries, Inc., Overton	4,000	3,450	3,750
O. K. Topping Plant, Kilgore	300	(*)	(*)
Oriental Oil Co., Dallas	5,000	(*)	(*)
Outdoor Refining Co., Kilgore	200	190	100
Overton Refining Co., Overton	3,000	1,500	2,000
Pacific Refining Co., Reed's Switch	1,800	1,740	1,250
Panama Refining Co., Kilgore	2,800	2,400	2,800
Pelican Refining Co., No. 1, Gladewater	500	(*)	(*)
Pelican Refining Co., No. 2, Gladewater	600	580	250
Pennant Refining Co., Kilgore	1,000	1,000	400
Pentex Refining Co., Gladewater	500	250	250
Petroleum Processing Co., Friars Switch	3,300	(*)	3,300
Phoenix Refining Co., Inc., Dallas	1,000	500	500
Pine Refining Co., Camps Switch	3,700	1,050	3,650
Price Refining Co., Gladewater	100	20	25
Producers Oil Refining Co., Reeds Switch	2,600	1,670	2,600
Recla Refining Co., Turnertown	200	(*)	(*)
Rig Topping & Refining Co., Kilgore	200	(*)	(*)
Roco Refining Co., Kilgore	2,200	2,080	1,400
Shoreline Refining Co., Kilgore	2,700	2,680	2,500
Simms Oil Co., West Dallas	4,000	1,500	1,500
Sinclair Refining Co., Camps Switch	5,000	1,500	1,600
Southport Refining Co., Kilgore	2,500	2,230	1,300
Staley, J. L., Refinery, Friars Switch	6,000	(*)	(*)
Supreme Refining Co., Gladewater	1,000	550	1,000
Texanna Refining Co., Kilgore	2,000	(*)	(*)
Texas Co., Dallas	16,000	10,000	10,000
Texas Oil Products Co., Gladewater	2,000	1,470	1,650
Texas State Refining Co., No. 1, Kilgore	1,000	820	400
Trio Refining Corp., Arp	1,500	920	1,800
Tyler, Texas Oil & Refining Co., Tyler	15,000	2,170	1,300
Tyreco Refining Co., No. 1 Arp	2,500	2,450	2,100
Tyreco Refining Co., No. 2, Overton	3,000	2,450	1,800
Union Refining Co., Camps Switch	3,000	2,560	1,900
Unit Refining Co., Kilgore	200	(*)	(*)
Upshur Refining Co., Gladewater	1,000	500	500
Utah Refining Co., Kilgore	2,100	2,100	2,000
Walrip & Stevens Refining Co., Omega	1,000	(*)	125
Ward, Walrip & Stevens Refining Co., Gladewater	500	(*)	(*)
Washington Refining Co., Kilgore	1,000	920	100
Wichita Refining Co., Gladewater	750	(*)	(*)
Wolfe Refining Co., Kilgore	1,000	(*)	(*)
Total	219,370	169,360	163,450

*Shut down.

SOUTHWEST TEXAS

Company and location—	Daily capacity	Aver. daily runs October	Aver. daily runs September
Amsco Refining Co., Mirando City	2,000	800	800
Bee Oil & Refining Co., Pettus	1,000	570	170
Capital Refining Co., Luling	2,500	(*)	(*)
Chapa Refining Co., Laredo	100	50	50
Citizens Refining Co., Luling	200	60	60
Humble Oil & Refining Co., San Antonio	5,000	2,500	2,210
Magnolia Petroleum Co., Luling	7,000	4,800	4,800
Pettus Refining Co., Pettus	1,000	400	430
Phoenix Refining Co., San Antonio	500	400	400
Pioneer Oil & Refining Co., Somerset	2,000	800	800
Price Refining Co., San Antonio	500	(*)	(*)
Rado Refining & Producing Co., McAllen	500	200	200
Texas Co., San Antonio	3,000	3,000	3,000
Texas Petroleum Products Co., Somerset	1,500	250	270
Total	26,600	13,830	13,130

*Shut down.

ARKANSAS

Company and location—	Daily capacity	Aver. daily runs October	Aver. daily runs September
Berry Asphalt Co., Waterloo	2,000	900	1,600
Henry H. Cross Co., Smackover	9,000	3,000	3,000
Lion Oil Refining Co., El Dorado	12,000	6,500	6,000
Macmillan Petroleum Products Co., Norphlet	2,300	2,300	2,000
Ouachita Valley Refining Co., El Dorado	2,500	2,000	1,200
Root Refining Co., El Dorado	10,000	5,000	5,000
Simms Oil Co., Smackover	3,000	2,200	2,200
Stephens Refining Co., Stephens	750	250	250
Total	41,550	22,150	21,250

NORTH LOUISIANA

Company and location—	Daily capacity	Aver. daily runs October	Aver. daily runs September
Acme Refining Corp., Monroe	100	50	50
Bayou State Refining Co., Hosston	750	150	150
Griswold Refining Co., Shreveport	1,000	200	200
Louisiana Oil Refining Co., Shreveport, Bossier	30,000	20,000	20,000
Pelican Refining Co., Converse	100	50	(*)
Shoreline Oil Co., Lewis	1,000	600	600
Spartan Refining Co., Shreveport	12,000	10,000	10,000
Stanolind Oil & Gas Co., Vivian	2,500	2,000	2,000
Texas Co., Shreveport	7,000	(*)	(*)
Total	55,450	33,050	32,850

*Shut down.

NORTH CENTRAL TEXAS

Company and location—	Daily capacity	Aver. daily runs October	Aver. daily runs September
All State Refining Co., Thrall	2,300	150	150
Archer Refining Co., Megargel	1,000	350	300
Atlantic, Pacific & Gulf Refining Co., Wichita Falls	5,000	100	(†)
Baird Refining Co., Baird	1,400	800	600
Canyon Oil & Gas Co., Inc., The, Cisco	500	(*)	(*)
Continental Oil Co., Wichita Falls	6,000	4,800	4,250
Empire Oil & Refining Co., Gainesville	5,000	3,000	2,500
Exchange Petroleum Corp., Albany	500	200	200
Falls Refining Co., Wichita Falls	2,000	275	200
Gratex Refining & Fuel Co., Graham	500	280	250
Gulf Refining Co., Fort Worth	10,000	4,000	4,000
Gulf Refining Co., Sweetwater	5,000	4,500	4,500
Haskell Oil Refining Co., Breckenridge	200	(*)	(*)
Jacksboro Refining Co., Jacksboro	50	50	50
LaSalle Petroleum Co., Burkburnett	3,500	190	500
Magnolia Petroleum Co., Fort Worth, No. 1	12,000	4,000	4,000
Magnolia Petroleum Co., Fort Worth, No. 2	6,000	(*)	(*)
Marathon Oil Co., Fort Worth	5,000	3,000	3,300
Moutray Refining Co., Hawley	600	250	250
Meunster Refining Co., Meunster	300	150	150
New Deal Refining Co., Abilene	300	(*)	(*)
Nolting Refining Co., Sweetwater	1,000	180	180
Margold Refining Co., West Olney	400	200	200
Olney Oil & Refining Co., North Olney	3,000	1,800	1,500
Omega Refining Co., Brownwood	200	(*)	(*)
Panhandle Refining Co., Wichita Falls	5,000	2,500	2,000
Paragon Refining Co., Leuders	400	150	150
Pen-ex Refining Co., Echo	400	(*)	(*)
Petroleum Oil Interests, Inc., Brownwood	1,000	200	200
Pilot Point Refining Co., Pilot Point	500	100	100
Sinclair Refining Co., Fort Worth	5,000	1,800	1,800
Southtex Refining Co., Trent	250	150	150
Southland Refining Co., Olney	1,000	(*)	(*)
Starlight Refining Co., Inc., Ballinger	300	200	200
Star Refining & Producing Co., Fort Worth	1,200	520	170
Superior Refining Co., Tiffin	800	(†)	(*)
Taylor Refining Co., Taylor	5,000	500	450
Taxman Refining Co., Wichita Falls	3,500	(*)	(*)
Texas Pacific Coal & Oil Co., Fort Worth	3,000	2,000	2,000
Texas Pacific Coal & Oil Co., Caddo	1,000	600	600
Tucker Refining Co., Wichita Falls	200	125	130
Waggoner Refining Co., Electra	6,000	1,185	1,000
Watt Refining Co., Brownwood	200	200	200
Total	107,500	37,705	37,300

*Shut down. †Cracking only.

Canadian Gasoline Sales Continue Upward Trend

OTTAWA, Ontario, Oct. 6.—The general trend of gasoline consumption in Canada in June, according to official figures just issued, was upward, six out of seven provinces showing increases over the same month last year. Figures from Nova Scotia and Saskatchewan were not available for the compilation made by the federal trade and commerce department from returns of the provincial gasoline tax departments.

Prince Edward Island gasoline consumption in June was 342,000 gallons, against 321,000 in the same month last year. For the six months a 1934 total of 853,000 gallons compared with 880,000 gallons in 1933.

New Brunswick totals were up for the month, reaching 1,605,000 gallons as compared with 1,430,000 in June, 1933. For the six months of 1934, however, the total was 4,147,000 gallons against 4,222,000 gallons in 1933. Quebec showed all round gains, the June consumption of 10,164,000 gallons comparing with 9,688,000 in June of last year, and the six months of 1934 showing a total of 35,631,000 gallons against 35,420,000 in 1933.

Gains were also shown in Ontario, the June consumption of 24,990,000 gallons comparing with 21,650,000 gallons in June, 1933; while for the six months of 1934 the total of 101,804,000 gallons compared with 97,239,000 gallons in the six months of 1933.

Increases were also recorded in Manitoba, the June, 1934, consumption of 2,970,000 gallons contrasting with 2,696,000 gallons in the same month last year, while 10,108,000 gallons for the six months of 1934 compared with 8,913,000 gallons for the same period of 1933.

Alberta consumption was down in June, 1934, a total of 3,878,000 gallons comparing with 4,216,000 in June, 1933. There was an increase, however, for the six months, the 1934 total of 17,400,000 gallons comparing with 16,599,000 in 1933.

British Columbia showed gains, the June total of 4,036,000 gallons comparing with 3,707,000 gallons in June last year, while for the six months of 1934 the consumption was 18,851,000 gallons against 16,894,000 gallons in the 1933 period.

FAVORS BRANDED PRODUCTS

Making the consumer "brand conscious" is the challenge to manufacturer and retailer today, according to Frank Lovejoy, sales executive of Socony-Vacuum Oil Co., Inc. Mr. Lovejoy and Kenneth Collins were the principal speakers Wednesday night at a public forum discussion at Pace Institute, Brooklyn, N. Y., on the subject, "Advertising and Selling—Their Part in the Development of Consumer Demand."

"I look to a new era in which advertising is to play a leading role," Mr. Lovejoy said. "In this era, the wise dealer will find that aggressively pushing the sale of branded products is his one great protection and definitely points the way to successful merchandising of the future. At the same time branded products are the one insurance of quality to the buying public.

"We are passing from the era of strictly price buying. A new public consciousness is being recreated, tending toward the recognition of quality and reputation. This trend in the final analysis will be reflected in favor of branded merchandise."

Homer B. Pace presided at the forum.

GASOLINE FROM COAL

VICTORIA, British Columbia, Oct. 6. According to information secured by Hon. G. S. Pearson, provincial minister of mines, production of gasoline from British Columbia coal is not yet an economic possibility. The laboratory branch of the federal mines department at Ottawa is keeping in touch with developments. In the laboratory, gasoline has actually been produced from coal, but it is not cheap enough to compete with ordinary commercial gasoline.

Hidalgo County Field Continues Chief Interest; Forty Locations Are Made in New Area

SAN ANTONIO, Tex., Oct. 8. — The newly discovered Sam Fordyce Field in southwestern Hidalgo County continues to hold interest in the Southwest Texas district. Twelve new locations were made bringing the total to more than 40. Six of these are now drilling, and six other tests are expected to get under way during the week. Nearly 400 acres in leases and royalties have changed hands, and it is estimated more than $800,000 has been spent in the area since the completion of the discovery well. So far the development is being carried on by independent operators. However, it is reported that one major company offered $60,000 cash for about 300 acres belonging to E. Powell in Share 342 and 14, Porcion 40 and 41, and that the offer was refused. The acreage lies in the bend of the Rio Grande River, about 1½ miles southeast of the discovery.

Heep Oil Corp. is drilling below 1,450 feet on its No. 1 Teresa F. De Flores, south of the discovery, in Tract No. 284, and the same operators have cemented surface casing at 200 feet on No. 1 Seabury, George and Taylor, northwest of the discovery in Tract No. 256. Alamo Drilling Co.'s No. 1 Sullivan, south of the discovery in Tract 283-284, is drilling below 1,000 feet. Northeast, Showers & Moncrief's No. 1 Francisco B. Guerra is drilling below 350 feet after cementing surface casing at 200 feet. The discovery operator, Otto Woods, has located No. 1 Francisco B. Guerra in Tract No. 254, north of the discovery well, and has cemented surface casing at 200 feet. Northeast Lucky-Blocker and Bishop are expected to get under way during the week on their No. 1 Francisco B. Guerra, on a 20-acre lease in Tract No. 254. Surface casing has been cemented at 200 feet. Five recent locations were made, of which four were made by Showers and Moncrief, three of which are located on their John Lawrence lease in Tract No. 274, Porcion 39. The same operators' No. 1 Edinburg State Bank & Trust Co. is in Tract No. 275, Porcion 40.

Otto Wood's No. 1 John Lawrence, the discovery well, continues its efforts to prove a nice well. On a 24-hour gauge it made 264 bbls. of oil at a temperature of 108 degrees through a three-eighths inch tubing choke. Working pressure on the tubing was 750 pounds with the casing flow closed. It is making 9,800 feet of gas per barrel of oil, and 11 bbls. of oil per hour. Working pressure on the tubing and casing have shown an increase since completion, producing through a three-eighths inch tubing choke, working pressure on the tubing was 1,050 pounds and casing pressure was 1,450 pounds. When the well was first completed, tubing pressure was 950 pounds and casing pressure was 1,230 pounds. The Duval Pipe Line Co. has started work on a gathering system from the well to a loading rack on the Missouri Pacific Railroad at Mission, and has posted a price of 60 cents a barrel for the crude at the well, which will be brought to the port at Corpus Christi for coastwise and export shipment. It is to be handled through the General American Tank & Storage Co.

Bexar County

A new shallow producing area in the eastern part of Bexar County has been opened up by Paul Meaders' No. 1 Cantu, a wildcat about 16 miles east of San Antonio, in the Jose M. Ariola Survey. It was completed late in the week for an initial production of 30 bbls. per day on the pump from the Cooksey sand from 1,470-90 feet. It was originally drilled to the Edwards lime at a total depth of 2,225 feet, where it tested sulphur water, and was plugged back to its present depth. With an elevation of 573 feet it topped the chalk at 1,930-2,058 feet and the Buda lime at 2,155 feet, Georgetown lime at 2,220 feet and the Edwards at 2,230 feet. Due to the shallow depth, this new area is expected to receive quite a few other tests in the near future. About 10 miles south of San Antonio in the same county, Linda Oil Co.'s No. 1 Tomassi, a wildcat in the Ignacio Perez Survey, was trying to make a drill stem test at 1,450 feet, after it had recovered some sand reported to have showed oil stains. It topped the Edwards lime at 1,446 feet.

Bastrop County

Northwest of the Cedar Creek Field in Bastrop County, Joe Mills' No. 1 W. W. Litton has the appearance of making a well in the Serpentine at a total depth of 1,735 feet. Casing has been cemented and it is due to be tested early this week.

In Gonzales County, the wildcat of Diamond Half Oil Co.'s No. 1 Kailles, in the Ira Nash Survey, 2 miles west of Belmont, was drilling below 3,800 feet late in the week with the Austin chalk not yet reported to have been topped. It is being drilled to the Edwards lime. Another Edwards lime test in Guadalupe County was shut down for water, below 1,100 feet. It is L. E. Trout's No. 1 McKey, in the Green Dewitt Survey, southwest of the Darst Creek Field.

Amerada Petroleum Corp.'s No. 2 Halff and Oppenheimer, wildcat 5 miles southwest of Persall, in the J. H. Gibson Survey No. 16, is drilling below 8,992 feet after testing salt water on its third drill stem test. It is drilling in the Glenrose lime. Another interesting test along the fault line is Humble Oil & Refining Co.'s No. 1 R. L. Anderson, in the J. J. Guerra Survey, in Uvalde County. It is scheduled to be drilled to 6,000 feet, but it is reported the company will drill it to the Ordovician lime if necessary to get production. It is being drilled on a large block and is being watched with much interest. Late in the week it was drilling below 4,100 feet.

Duval County

On the Piedras Pintas Salt Dome, Duval County, Texon Royalty Co.'s No. 2 Parr is coring below 3,449 feet. It offsets the company's No. 1 Parr, which surprised the district when it was completed in September, with an initial production of 600 bbls. daily. The completion of the company's first test marked the first new production in this field since 1925, when Humble Oil & Refining Co. completed No. 4 Walsh, which produced for a few months and then went dead. No. 2 Parr is 75 feet southwest of No. 1 in Survey No. 185. In the same county but in the Government Wells Field, four completions were recorded. Al Buchanan's No. 4 Duval County Ranch Co. was completed for an initial production of 100 bbls. per day from a total depth of 1,497 feet. Humble Oil & Refining Co.'s No. 42 Paul White, in Survey No. 58, topped the sand from 2,267-76 feet and was completed for an initial production of 15 bbls. per hour on a quarter-inch choke from a total depth of 2,317 feet. In Survey No. 59, Magnolia Petroleum Co.'s No. 12 Duval County Ranch Co. topped the sand at 2,180-88 feet and was completed for 10 bbls. per hour at a total depth of 2,228 feet. The same company's No. 35 Duval County Ranch Co., in Survey No. 209, made 8 bbls. per hour at a total depth of 2,323 feet.

Nueces County

In the Agua Dulce Field, Nueces County, Texon Royalty Co.'s No. 1 Walton extended the field 1 mile south when it was completed for 40,000,000 feet of gas and 50 bbls. of gasoline daily from a depth of 4,775 feet. Location in Lot No. 5 in the Chapman Partion Survey. The same operators have derrick up for No. 1 R. Driscoll, in the same survey.

West Tuleta

In the West Tuleta Field, Bee County, Blanco Oil Co. and others' No. 1 Perez has been completed for an initial production of 60 bbls. per day, extending production three-quarters of a mile southwest. When it was first tested from 3,886-3,930 feet it tested mostly gas, but the operators have reset the liner lower in the pay and were successful in completing it for an oil well. It is producing from sand at 3,917-30 feet. Dirks Brothers' No. 2 Skinner and Harris topped the sand at 3,938 feet and completed it with an initial production of 250 bbls. daily. It is south of the discovery well and makes the eleventh producer in the field. Gulf Production Co. has farmed out its 160-acre tract, in the SW Section 10, to Mills Bennett Production Co., and the latter company has made location on the tract for No. 1 Tuleta Mercantile Co. The acreage lies just east of Blanco Oil Co.'s No. 1 Perez, which has just been completed for a producer. Edwin M. Jones' No. 3 Robinson, in the southeast corner of the Robinson tract, tested gas, but no oil in the Pettus sand at 3,910-37 feet and is being drilled to the Yegua sand which is expected at about 200 feet below the Pettus.

San Patricio County

Petrol Oil Corp.'s No. 1 R. H. Welder, in the Sinton Field, San Patricio County, has been completed, making considerable gas with an estimated 40 to 50 bbls. of oil daily. It was originally drilled below 6,000 feet and has been plugged back and sidetracked at 5,400 feet. It is 1 mile west of the discovery, and is the first oil producer in the field. The discovery well, drilled by the Plymouth Oil Co., was completed as a gas well. No. 1 R. H. Welder is producing from 5,427 feet. Northeast of Sinton, Heep Oil Co.'s No. 4 Welder is drilling below 6,451 feet in shale.

Atkins and O'Neal have made location for an interesting wildcat in Jackson County in their No. 1 W. L. Hodges, center of Lot No. 22, Block 8, of the first subdivision of the L. A. Ward farms.

Starr County

The wildcat of E. L. Younkins, No. 1 Kelsey Bass, Block 19, B.&B. Oil Co. subdivision of Porcion 87, Ancient Jurisdiction of Camargo, Starr County, was preparing to make a drill stem test from 1,740-46 feet, where it was reported to have cored a good sand showing saturation. It is to be tested during the week. Smith-Tex Oil Co. has made location for its No. 1 Starr County Cattle Co. in Block 19, Jeffries-Lambeth Subdivision of Porcions 87 and 88. It is in the central part of the county. Location is 1,320 feet southeast of the Weekly-McGinley gas well, completed some months ago as a large gas well.

Live Oak County

One mile northwest of the McNeil Field, Live Oak County, Coquat and others have spudded No. 1 Little. It is in the M. M. Shipp Survey and will be a very interesting test due to its location from the discovery well. In the McNeil Field, Lion Oil & Refining Co. is drilling below 2,600 feet in shale on No. 2 McNeil, northeast of the company's No. 1 McNeil.

Wildcat Operations in Southwest Texas

Week Ending October 6

BANDERA COUNTY

A. P. Crane & Co.'s No. 1 Watson, 988 ft. NE line, 926 ft. SE line, Sec. 71, Antonio Curvier Sur.
No report.

Plateau Oil Co.'s No. 1, Garrison Sur. No. 506, 1,500 ft. from N and 2,700 ft. from E lines of Sur. (8 mi. SW of Medina).
Prepare to start up at 496 ft.

BASTROP COUNTY

Champion et al's No. 1 Charles E. Anderson, Antonio Navarro Sur.
S.D. 850 ft.

BEE COUNTY

Tuleta Oil Co.'s No. 1 George Ray, 320 ft. from E line, midway between N and S lines of George Ray 208.7-ac. tract in Blanchard Sur., 3 miles SW of Tuleta Field.
Location.

Humble O. & R. Co.'s No. 1 Daniel Fox, 7,500 ft. from N line, 3,370 ft. from E line of 1,334-ac. tract in M. Fox Sur.
Rigging up.

Worth Oil Co.'s No. 1 Rutledge, 1,000 ft from N line and 300 ft. from E line of A Hadley Sur.
Sand 1,731-33 ft.; tested gas; drlg. deeper.

BEXAR COUNTY

Lloyd Bender's No. 1 Evans, 1,200 ft. from W line, 200 ft. from N line of 312.7-ac. tract in de la Garza Sur.
Standing 979 ft.

F. T. Chew's No. 1 C. S. Ogden & Brooks, 50 ft. E line, 2,500 ft. from Mitchell Lake, on 1,500-ac. tract, Irrigated farms.
Drlg. 250 ft.

M. J. Crouch's No. 3 Hoch, 1,500 ft. N of Medina River, 300 ft. W of E line of 220-ac. tract and 1,350 ft. NE of No. 2 gas well.
Cmtd. csg. 755 ft.

Dr. Dickens' No. 1 Victor Golia, 150 ft. NW line and 150 ft. NE line of Cardines No. 25 Sur.
S.D. 530 ft.

Jones & Kieffer's No. 1 LaGrane, NW cor. of tract, 210 ft. each way, F. Rolen Sur.
Location.

Linda Oil Co.'s No. 1 Tomasi, Ignacio Perez Sur., 7,694 ft. NE along W line from SW cor., 480 ft. SE of NW line.
Edwards lime 1,446-50 ft.; trying to make D.S. test.

McFee & Briggs' No. 1 Carter, Manuel De Luna No. 2 Sur.
Rig up and S.D.

McFee & Briggs' No. 1 Lamb, 9,200 ft. from S line, 800 ft. W line, Manvel Deluna Sur. No. 3, Tract A. & B.
Coring 1,009 ft.

Medina Oil Co.'s No. 1 Hendricks, 700 ft. S line, 400 ft. W line of 108-ac. tract, County Blk. 491, C. A. Yoakum Sur. No. 39.
T.D. 1,050 ft.; preparing to resume drlg.

Paul Meador's No. 1 Wm. Cantu, 305 ft. from SW line, 1,750 ft. from SE line of 50-ac. tract in Jose M. Ariola Sur., eastern part of county.
T.D. 2,255 ft.; P.B. 1,490 ft.; comp. pumping 30 bbls. daily.

Ricker & Auld's No. 1 C. H. Kearney, 2,000 ft. from E line, 300 ft. from S of tank, Villapando Sur. No. 142.
Location.

BROOKS COUNTY

Cole Pet. Co.'s No. 1 Ulrich, 785 ft. E line, 1,323 ft. S line of C.C.S.D.&R.G.N.G. Sur. 7.
Drlg. 4,231 ft.

Mrs. Florence Kast's No. 1 Madrigal, Rafel Garcia Salinas grant, 800 ft. S line and E line, Share B.
T.D. 480 ft.; to drop from report.

CALDWELL COUNTY

Anderson's No. 1 Perry, 330 ft. SE and NE lines of 27-ac. tract, Giddeon Pace Sur.
Standing 1,348 ft.

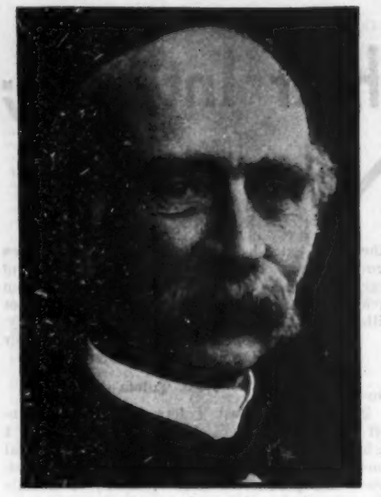
F. P. Hynes et al's No. 1 Tramwell, 750 ft. from SE line and 330 ft. from NE line of tract in Ester Berry Sur.
No report.

Kurz Oil Co.'s No. 1 Kurz ranch fee, 4,600 ft. SW line and 4,300 ft. SE line of Barnard Kiekant Sur.
Drlg. 3,573 ft.

F. Meyers' No. 1 Mooney, 260 ft. from road, 380 ft. from middle of SE cor. of 102-ac. tract, Seale Sur.
Location.

Stanley Smith's No. 1 J. C. Copeland, about 4 miles SW of Lockhart and beyond the Mebane Estate.
Setting up machinery.

(Continued on Page 54)



BUSINESS MAN

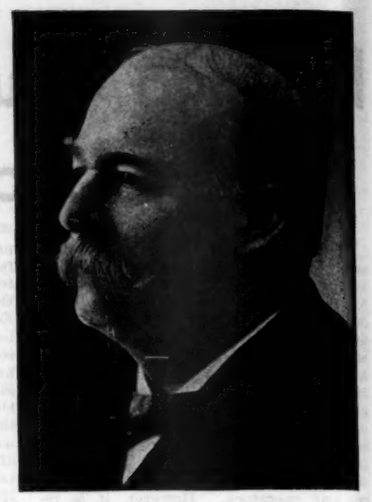
C. N. Gilbert saw a promising future in making a new type gas machine to burn safely high test gasoline. He left Chicago in 1865 to work out plans in Springfield, Mass. Not many days passed before Gilbert met J. F. Barker, machine designer.

Gilbert and Barker

Subsidiary: STANDARD OIL COMPANY (NEW JERSEY)

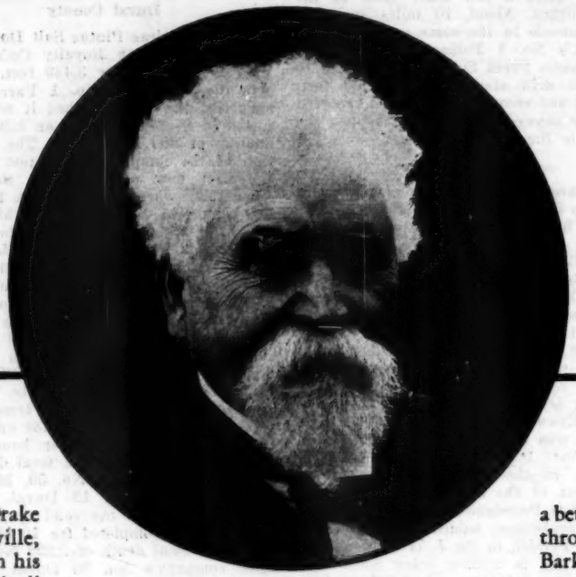
• • •

Manufacturers of Oil Burners—Oil Furnaces—Gasoline Pumps—Oil Dispensing Pumps—Storage Tanks for Petroleum Products—Air Conditioning Equipment—Domestic and Industrial Hot Water Heaters—Stove Burners—Side-Arm Heaters—Airplane Servicing Equipment.



MACHINE DESIGNER

J. F. Barker developed the safer gas machine which took fire and explosion risk of past machines out of American homes, mills, and hotels. Fifteen years' experience with tools made up for anything Barker lacked in higher technical education.



Draftsman HIRAM MAXIM

At twenty-five, the inventor of the Maxim Machine Gun was a busy draftsman in Springfield, Mass., putting Barker's gas machine designs on paper. In 1901 the British Government knighted Barker's former draftsman.

IN 1865: Less than six years after Colonel Drake drilled the first successful oil well at Titusville, Pa., C. N. Gilbert of Chicago had tucked in his pocket patents covering a portable "gas machine" for heating and lighting with gasoline. In the back of his mind Gilbert saw a type of gas machine different from any on the market—(no explosions or fires!)—more economical and efficient than any yet manufactured. He decided to go east.

Soon after Gilbert's arrival in Springfield, Mass., The New England Portable Gas Works sprang to life, operating under his patents. J. F. Barker, age twenty-four years (fifteen spent close to a tool chest), quit as supervisor of pipe work at the Water Shops of the Springfield Armory, and became the new Gas Works' superintendent. What Barker lacked in higher technical education (he had to quit school at nine) he had learned first hand with taps and dies, pipe threaders and flanges. At fifteen he knew enough to hold a job as boss of a gang of mechanics.

Barker, wizard of practical machine design, agreed with Gilbert, business man, that they wanted a better, more economical, and safe gas machine. There were gas machines galore—but the public was wary and a bit fearful. Had not the machine in the Springfield Armory caused an explosion?

Barker at once looked about for a draftsman to put designs on paper. A likely looking applicant of 25 asked for the job—and got it. (Twenty years later Barker's former draftsman invented the Maxim machine gun—in 1901 the British government knighted Hiram Maxim.)

For two years Barker, Gilbert and draftsman Maxim designed, criticized, improved, simplified. The new machine to burn high test gasoline must be far and away ahead—and absolutely safe.

IN 1867: Early in 1867, the group of three agreed that they had the desired machine, Barker got on a train to Washington—with his patent applications. He pointed out the urgent necessity of their issue: Weren't American homes and public buildings under a fire hazard from present types of gas machines? The patent office saw the point and quickly allowed Barker's claims. Back in Springfield the newly organized Springfield Gas Machine Company soon started to manufacture under Barker's patents—valued at some $110,000.

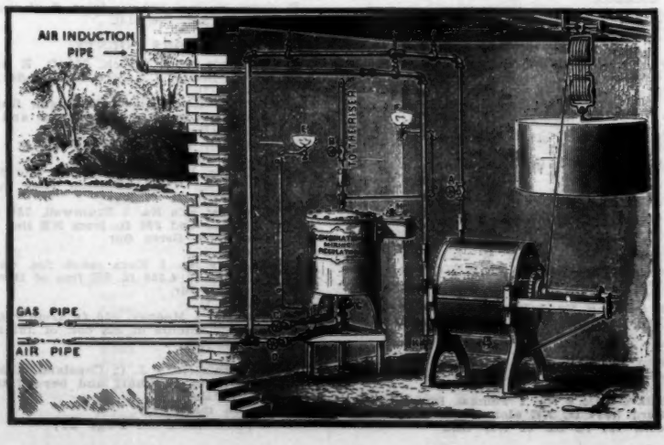
Gilbert set out after orders. Barker watched production with a trained and critical eye. Thus, a better gas machine started the concern that grew through the years to become today's Gilbert and Barker Manufacturing Company.

IN 1869: "These machines are automatic, safe and reliable—are made of copper. They give at all seasons of the year an excellent light at about $1.50 per thousand feet."

Thus did an advertisement in the Springfield Union modestly proclaim the merits of the Springfield Gas Machine. The improved gas machine, manufactured under patents granted in 1867 to J. F. Barker, proved an instant success.

So successful, in fact, had been the sales efforts of C. N. Gilbert, concentrated in New England, that from distant points came requests for information on the safe machine which vaporized high test gasoline for lighting and heating purposes. More and more inquiries from New York City reached the Springfield manufacturing plant—already well stocked with orders. Under Barker's ever-watchful eye, production kept pace with orders.

The start of the year 1869 saw the enterprising Springfield Gas Machine Company with a sales problem on its hands. New York City—population



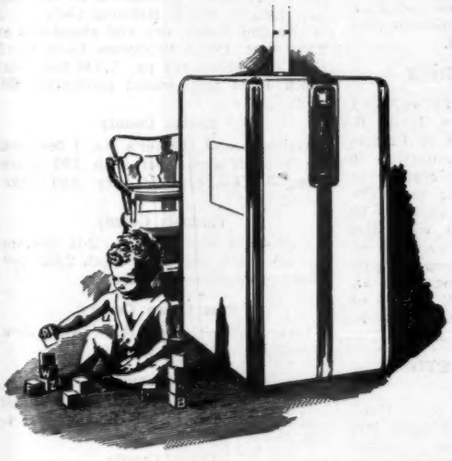
SPRINGFIELD GAS MACHINE, *developed by J. F. Barker, drafted by Hiram Maxim, and sold by C. N. Gilbert, proved an instant success after its introduction in 1867. Diagrammatic sketch (left) showed purchasers how to operate the machine:*

(A) Valve controlling air from air pump to generator—(B) Valve controlling gas to house lights—(C) Valve controlling gas from generator to gas mixer—(D) Valve controlling air from air pump to gas mixer—(E) Test light on incoming gas from generator to gas mixer—(F) Test light on gas main going to house service—(G) Plug opening to automatic valve on air entrance to gas mixer—(H) Plug opening to weight adjustment on air control valve. (K) Test valve on well on outgoing air from the air pump to drain off the accumulated liquid.

then 1,478,113 and growing fast—persisted in its demands for the new lighting equipment. The 600 machines already in use—lighting mills, factories and dwellings were behaving perfectly. Everywhere customers proclaimed that here was a gas lighting system free of fire and explosion hazard! Small wonder that New York City—with its far from fire-proof wooden frame buildings—let out a cry that finally was heard 143 miles away in Springfield.

In January 1869, Barker travelled to New York, sauntered about in search of quarters for a retail store for the sale of the Springfield Gas Machine Company's goods throughout the country outside of New England. At 238 Canal Street, corner of Centre (just three blocks from today's police headquarters) he set up General Offices. Gilbert came down from Springfield to help.

New York already had heard of the safety of Barker's Gas Machine. Its economy was yet another story: "about $1.50 per thousand feet" read the company's advertisement. Today with all kinds of modern equipment and hundreds of thousands more consumers—all served through a common distribution system—most New Yorkers pay $1.15 per thousand cubic feet for gas for cooking, refrigerating, and hot water.



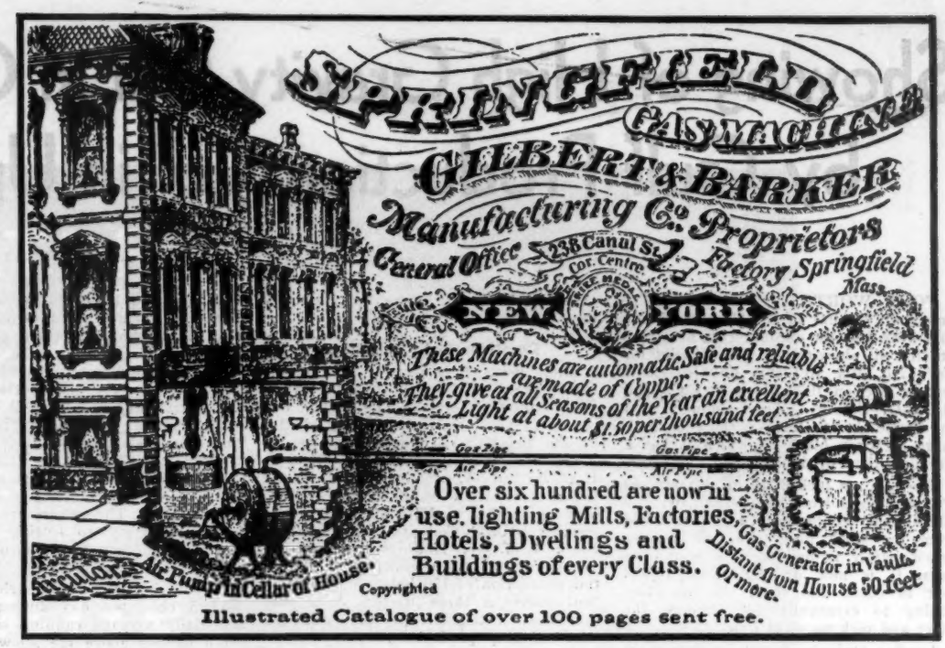
1934 EXAMPLE OF GILBERT & BARKER DESIGN: *completely Automatic Oil Furnace for domestic heating. Efficiency 25% greater than conventional oil burner design. Styled in modern, stream-lined manner.*

From February to September 1869, Gilbert and Barker supervised operations of the New York store and installations of many gas machines in New York City. Then back to Springfield—where the two bought out the Springfield Gas Machine Co. Horace R. Barker of Lowell, Mass., and W. S. Gilbert of Cohoes, N. Y., became firm members. The sign on the new plant read "Gilbert, Barker and Company" until 1870, when the concern was incorporated as Gilbert & Barker Manufacturing Co. Barker was Treasurer and Manager—Gilbert President.

Articles of Incorporation stated the purpose of the company was to manufacture gas machines, storage tanks for gasoline and metal barrels. Auxiliary equipment for gas machines were the tanks and barrels—sales ran hand in hand with output of gas machines.

Until the advent of Edison's electric light, the popularity of Barker's gas machine never dwindled.

It opened up a new market for gasoline—before the coming of the automobile, a by-product in little demand. And, too, it pointed the way to future Gilbert and Barker developments in dispensing pumps and other products to measure or burn petroleum.


SPRINGFIELD
GAS MACHINE
GILBERT & BARKER
Manufacturing Co. Proprietors
General Office 238 Canal St. Cor. Centre
Factory Springfield Mass.
NEW YORK
These Machines are automatic Safe and reliable
They give at all Seasons of the Year an excellent Light at about $1.50 per thousand feet
Over six hundred are now in use, lighting Mills, Factories, Hotels, Dwellings and Buildings of every Class.
Air Pump in Cellar of House.
Gas Generator in Vault or more. Distant from House 50 feet
Copyrighted
Illustrated Catalogue of over 100 pages sent free.

FREE ILLUSTRATED CATALOGUE *of over 100 pages on Springfield Gas Machine and accessories was offered in this 1869 advertisement in the Springfield, Mass. Union and Harper's Bazaar.*

IN 1934: Today the Gilbert & Barker plant, embracing 500,000 square feet of floor space, manufactures two principal products:

Gasoline dispensing pumps and domestic oil heat units (oil burners and oil furnaces).

As the largest manufacturer of oil dispensing and consuming equipment, the Company produces many different styles and models. From the small non-measuring type to the latest model "Calco-Meter" Automatic Computing Pump—with automatic computing device instantly registering dollars and cents value of any gallonage—Gilbert & Barker Pumps are in service throughout the world — wherever petroleum products are sold.

In the development of domestic oil heat units, the Gilbert & Barker background of long experience with oil played an important part.

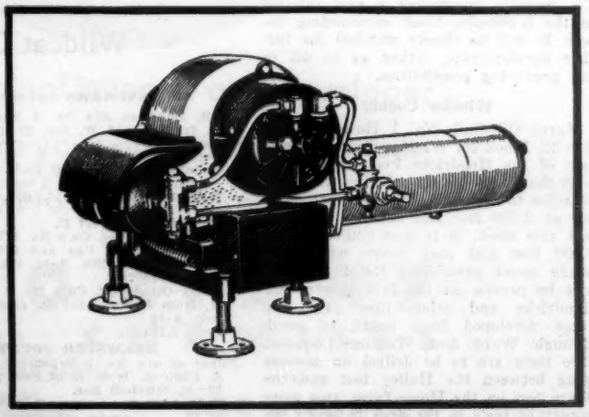
As early as 1889 the Company produced a line of industrial Fuel Oil Burning Systems and Furnaces.

With the same care and thoroughness which characterized the work of J. F. Barker in evolving a better, safer gas machine in 1867, Gilbert & Barker research men spent seven years studying the problem of efficient oil heat for the home. Before a single burner was offered to the public, 50 were installed in homes of company employees for extended test under actual working conditions.

Completely satisfied with the final check on its development work, Gilbert & Barker sold and installed its first domestic oil burner in 1930.

The intervening years had witnessed a steady increase in sales volume of Gilbert & Barker oil burners—both in the United States and foreign countries.

In June, 1934, the Company announced the addition of a complete domestic oil furnace (for steam or hot water systems) and a combination warm air oil furnace and air conditioning unit. The latter equipment marks the Company's entrance into the air conditioning field.



HEATING THOUSANDS OF HOMES (*American and Foreign*) *is the Gilbert and Barker Oil Burner, first marketed in 1930. The Type JB Burner, shown above, represents but one of four sizes in the complete range of models, meeting all domestic oil heat requirements.*

• • •

LATEST MODEL *Gilbert and Barker Calco-Meter Automatic Computing Pump shows instantly gallonage and total amount due.*

(THIS IS THE FIRST OF A SERIES OF ADVERTISEMENTS ON THE HISTORY AND GROWTH OF GILBERT AND BARKER MANUFACTURING COMPANY, SPRINGFIELD, MASS.)

Showing of High Gravity Oil in Ordovician Test by Gulf Production Co. in Upton County

By L. E. BREDBERG
Fort Worth Bureau, The Oil and Gas Journal

FORT WORTH, Tex., Oct. 8.—The important feature in the Permian Basin this week was the encountering of a high gravity oil showing in Gulf Production Co.'s No. 103 McElroy, an Ordovician test in Section 197, Block F, C.C.S.D.& R.G.N.G. Survey, Upton County, near the Crane County line, on the company's large McElroy block on which it has a Permian lime producing field.

The oil was picked up in soft streaks of lime logged from between 10,794 and 10,840 feet, samples of the oil skimmed from the slush pit testing 37 degrees gravity after it had stood a couple of days. It is now drilling below 10,856 feet in chert and lime, the operators hoping to eventually get through the chert and pick up solid lime.

Another Ordovician test is planned in the county in which there are two such tests now being drilled. Kemper Kimberlin, Procter and J. D. Wesner, the former of San Angelo, have obtained a block formerly held by Pure Oil Co., which centers around Section 4, Block L, G.H.& S.A. Survey, 3 miles northeast of the test now being drilled by J. M. Cooper on the Page ranch, Schleicher County. Humble Oil & Refining Co. is also drilling an Ordovician test in this area, about 9 miles north of the Page test which ran acid this week to soften the formation, and which is drilling below 5,775 feet. The Humble test is below 4,367 feet. It is in Section 38, Block M, G.H.&S.A. Survey.

Ector Wildcat

The wildcat of Landreth Production Co. on the Scharbauer ranch in Section 20, Block 44, Township 1n, T.&P. Survey, northwest Ector County, is looking still more favorable as a producer after picking up more gas at 4,085 feet, estimated at around 25,000,000 feet. About 15,000,000 feet was picked up at 10,064 feet and this gas was killed to allow deeper drilling, but when drilling reached the present depth the pressure became too great to hold in check, the well blowing out on October 7. The operators will endeavor to kill the gas again to drill deeper. This is probably the most important wildcat now drilling for the Permian lime in the district, Humble Oil & Refining Co. recently purchasing a half interest in the 6,100-acre block surrounding the test. It will be closely watched for further developments, either as to oil or gas producing possibilities.

Winkler County

Sayre Oil Co.'s No. 1 Howe, in Section 12, Block 26, Winkler County, northeast of the Hendricks Pool, on a trend with the Skelly Oil Co.'s Halley producer, 14 miles to the south, logged an oil showing at 2,700 feet and another at 2,775 feet this week. It is now drilling below 2,800 feet and may prove whether a sandy trend paralleling the lime trend will be proven on the east side of the Hendricks and other lime producing areas developed from south to north through Ward and Winkler Counties. Two tests are to be drilled on acreage lying between the Halley test and the Sayre test on the Howe farm, two more important tests in the area to prove the possibilities of the sand trend. One is in Section 37, Block 26, and the other in Section 6, Block B-5. Sid Richardson's No. 1 M. H. Hill, in Section 16, Block B-11, 2 miles northeast of the Halley producer, drilled to 2,950 feet without encountering any oil. The Halley producer topped the pay at 3,105 feet and is bottomed at 3,112 feet. It flowed 382 bbls. the first 16 hours before being shut in for storage.

Locations and Completions

There were 16 locations staked in the West Texas district during the week, and 14 tests completed. The wildcat discovery in northern Pecos County, drilled by the Tex-Mex Petroleum Corp. on the Netterville ranch in Section 59, Block 8, H.&G.N. Survey, was completed for an initial production of 40 bbls. per day, opening another pool in this county. Eppenauer Drilling Co.'s No. 1-B Combs, in Block 4, J. W. Hollingsworth Survey, Ward County, was completed for an initial production of 186 bbls. per day. This well proves a three-quarters of a mile southwest extension to the southern Ward County production.

Grisham and Hunter's No. 1 fee, in Section 1, Block 50, Township 8, T.&P. Survey, Reeves County, was abandoned this week at a total depth of 5,222 feet after shooting and testing and proving dry. It was an extreme wildcat.

WICHITA FALLS DISTRICT

There were 62 locations in the Ranger and Wichita Falls districts during the week, activities in the latter district increasing rapidly since recent rains supplied plenty of water. There were 25 tests completed in that district, 12 abandoned as dry, the others oil.

Lambert and Stump have location staked for a deep test on the Munger ranch, approximately 1,250 feet north of the 3,800-foot production in the K.M.A. area, Wichita County, in the northwest corner of Block 30, K.W.V.F. lands. C. A. Everts Drilling Co.'s No. 1-A Kemp and Kempner, in Lot 4, Block 5, same area, is looking as a possible deep producer since logging saturated lime and sand from 3,896-3,906 feet. Casing has been cemented at 3,893 feet and is standing shut down.

J. C. Bertrand and others, of Wichita Falls, are drilling a 4,000-foot test on the K. Drieschner and others land in the NW cor. Section 62, Block 16, H.&T.C. Survey, Wilbarger County. Melat and Payne hold a 7,500-acre block around this test and have contracted to drill a deep test, spudding within 30 days.

J. T. Bryan and others (Ungren and Frazier) of Abilene, have opened another sand producing area in their Percy Jones test in the NW Section 5, Block 15, T.&P. Survey. It is 2 miles south and west of the Higgs' five-well pool which is producing from hard lime logged around 1,930-31 feet. It filled 600 feet in two hours and is estimated good for 60 bbls. per day. Gravity of the oil tests 38.8 degrees. The owners are underreaming preparatory to setting casing and drilling in. They have approximately 1,000 acres around the test.

Production in the district averaged 63,995 bbls. per day during the week, the daily average running several thousand barrels above the allowable. Next week's figures will no doubt show a decrease due to the allowable being cut 5 per cent of each well's excess potential, or to the marginal well allowance plus 5 per cent of their potential.

PANHANDLE DISTRICT

Humble Oil & Refining Co.'s No. 1 Logan, a wildcat in Section 1, A. B. Pedigo Survey, 2 miles west of Pringle and 7½ miles north of production in Hutchinson County, is apparently the forerunner of a new producing area. The test topped saturated lime at 3,217-19 feet and filled up 700 feet with 34.6 gravity oil in a short time. There is no gas with the oil and the owners are putting it on the pump. The test is on an 11,000-acre block, and it will be one of the most interesting discoveries made in the entire district in a long time.

WEST TEXAS COMPLETIONS

Ector County

C. J. Davidson and others' No. 1 Cole, total depth 4,509 feet; shot with 360 quarts from 4,180-4,340 feet; treated with 2,000 quarts; initial production 18 bbls. per day.

Howard County

Amerada Petroleum Corp.'s No. 3 Roberts, top pay 2,993 feet, total depth 2,994 feet, initial production 340 bbls. per day, pumping. California Co.'s No. 4 Roberts, operations abandoned at 2,996 feet; No. 11 Roberts, operations abandoned at 3,013 feet. Sinclair Prairie Oil Co.'s No. 1 Davis, top pay 2,408 feet, total depth 2,819 feet, shot twice, initial production 180 bbls. Eastland Oil Co.'s No. 2 Chalk, top pay 1,752 feet, total depth 1,858 feet, initial production 480 bbls.

Irion County

Williams and Short's No. 1 Gentry, dry and abandoned at 1,491 feet.

Loving County

Byrd Brothers and others' No. 1 Thorp, abandoned at 818 feet.

Pecos County

Tex-Mex Petroleum Corp.'s No. 1 Netterville, top pay 2,210 feet, total depth 2,291 feet, initial production 40 bbls. per day. Humble Oil & Refining Co.'s No. 2 White and Baker, dry and abandoned at 2,213 feet. Pecos Producers Co.'s No. 1 Reid and Ogden, top pay 1,325 feet, total depth 1,344 feet, initial production 690 bbls.

Reeves County

Grisham and Hunter's No. 1 fee, total depth 5,227 feet, shot with 170 quarts from 5,174-5,222 feet, dry and abandoned.

Runnels County

Petroleum Interests' No. 2-B Brevard, top pay 2,506 feet, total depth 2,530 feet, initial production 754 bbls.

Tom Green County

Hancock, Reed and Atkins' No. 1 Reed, abandoned at 508 feet.

Upton County

Broderick and Calvert's No. 1 Homer National Bank, dry and abandoned at 4,823 feet.

Ward County

Richardson's No. 5 O'Brien, top pay 3,018 feet, total depth 3,092 feet, initial production 510 bbls. Eppenauer Drilling Co.'s No. 1-B Combs, top pay 2,346 feet, total depth 2,423 feet, shot twice, initial production 186 bbls. per day. Tex-Mex Petroleum Corp.'s No. 3 Llano-Owens, top pay 2,590 feet, total depth 3,036 feet, initial production 402 bbls. per day. Richardson's No. 4 Johnson, top pay 2,338 feet, total depth 2,519 feet, initial production 563 bbls. per day. Caprito's No. 7 Bennett, top pay 2,330 feet, total depth 2,533 feet, initial production 306 bbls. per day.

Winkler County

Richardson's No. 1-H Scarborough, total depth 3,077 feet, initial production 155 bbls. per day.

WICHITA FALLS COMPLETIONS

Archer County

Anderson's No. 5 Justice, top pay 857 feet, total depth 877 feet, initial production 15 bbls. of oil and 5 bbls. of water. Burns' No. 1 O'Donohoe, dry and abandoned at 1,605 feet; No. 1 Wilson, dry and abandoned at 956 feet. Clampitt's No. 1 Benson, dry and abandoned at 956 feet. Crofton Oil Co.'s No. 5 Logan, top pay 1,154 feet, total depth 1,170 feet, initial production 130 bbls. Cullum and Sinclair Prairie Oil Co.'s No. 12 Falls-Scranton, top pay 1,099 feet, total depth 1,113 feet, initial production 85 bbls. per hour, swabbing. Fain-McGaha's No. 22-C Ferguson, top pay 655 feet, total depth 657 feet, ini-

(Continued on Page 51)

Wildcat Operations in West Texas

Week Ending October 6

ANDREWS COUNTY

R. S. Bond et al's No. 1 McCarley, 1,320 ft. from N and W, Sec. 29, Blk. 3, P.S.L. Sur.
Drlg. 1,695 ft.

Honolulu and Llano Oil Co.'s No. 1 J. E. Parker, 1,320 ft. from S line and 1,470 ft. from W line of Sec. 7, Blk. A-44, P.S.L. Sur.
Drlg. by tools 4,487 ft.

Humble Oil & Ref. Co.'s No. 1 B. S. Walker, 660 ft. from E line and 660 ft. from S line of Sec. 6, Blk. A-43, P.S.L. Sur.
Drlg. 3,025 ft.

Humble Oil & Ref. Co.'s No. 2 Means, 1,980 ft. from S and 1,487 ft. from W, Sec. 6, Blk. A-19.
Drlg. 3,710 ft.

BREWSTER COUNTY

Joiner et al's No. 1 McIntyre, 353 ft. from S, 2,390 ft. from E of Sec. 31, Blk. 352, W. M. Mitchell Sur.
S. D. 2,100 ft.

COKE COUNTY

Wm. Hooper's No. 1 Gaston, 240 ft. from S line and 654 ft. from W line of Joseph Sur. No. 11.
S.D. 2,540 ft.

CRANE COUNTY

Continental Oil Co.'s No. 1 M. Dawson, 1,320 ft. from N and 440 ft. from E, Sec. 36, Blk. X.
Set csg. 2,340 ft.

Loffland Bros. et al's No. 1 Tubbs.
Preparing to deepen; T.D. 4,516 ft.

Gulf Prod. Co.'s No. 1 E. M. Snodgrass, 1,320 ft. from N and 1,320 ft. from W line of Sec. 1, Blk. B-35, P.S.L. Sur.
17 bbls. oil per day 3,390-3,491 ft.; shot; T.D. 3,500 ft.; testing.

Strauss' No. 1 Phelps et al, 2,113 ft. from N and 713 ft. from NW Sec. 13, Blk. 31, H.&T.C. Sur.
Spudded.

CULBERSON COUNTY

Anderson-Pritchard Oil Corp., Magnolia Pet. Co. et al's No. 1 Bordera, 1,255 ft. N and 2,305 ft. from W, Sec. 34, Blk. 69, P.S.L. Sur.
Fishing 423 ft.

Miller Bros.' No. 1 fee, 1,900 ft. from N and 660 ft. from E line of Sec. 21, Blk. 97, P.S.L. Sur.
S.D. 1,430 ft.

DAWSON COUNTY

Ray Albaugh et al's No. 1 John Robinson, 1,320 ft. from N line, 1,320 ft. from W line of Sec. 46, Blk. M, E.L.R.R. Sur.
S.D. 3,957 ft.

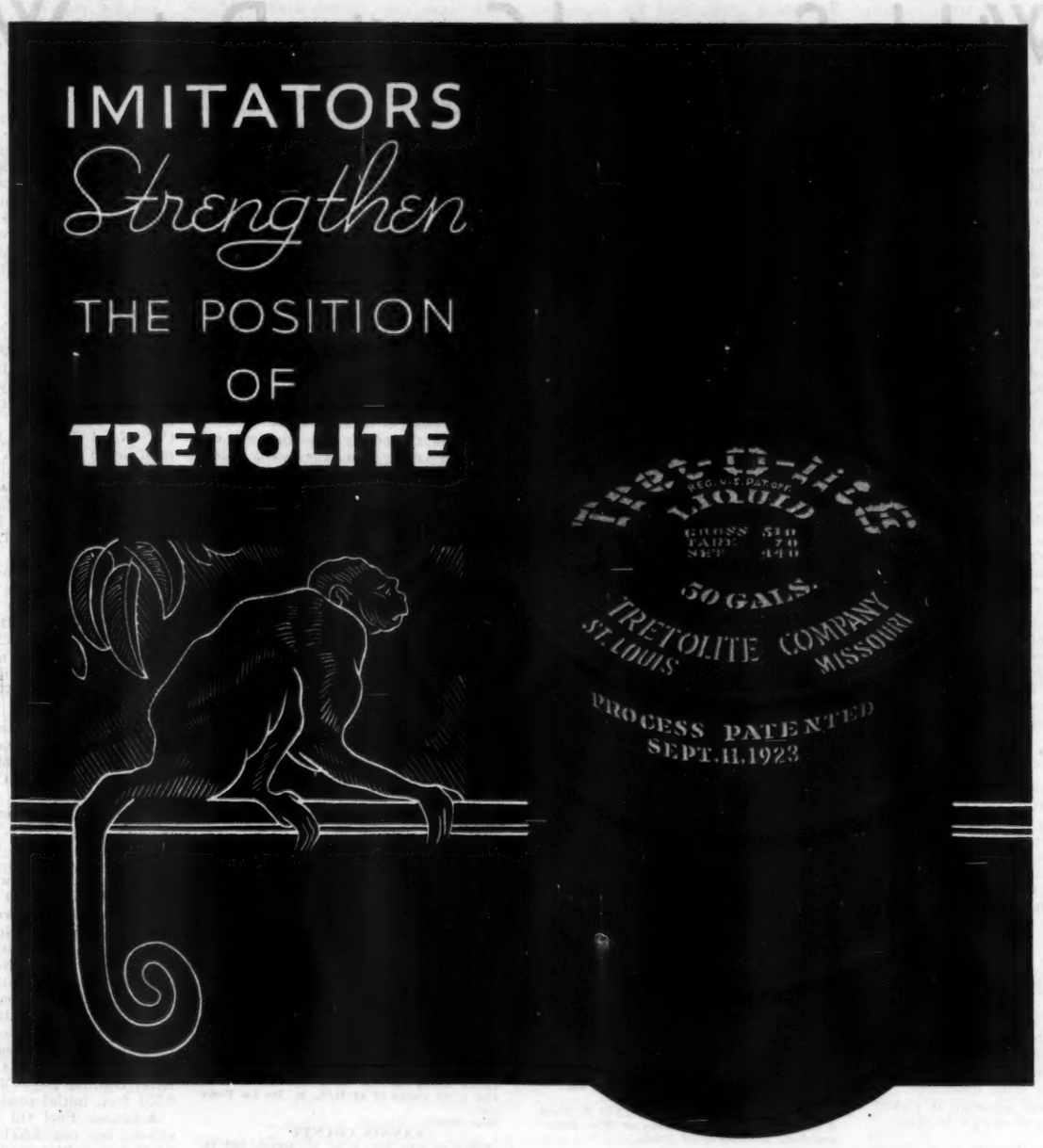
ECTOR COUNTY

Harrison et al's No. 3 Addis, 1,650 ft. from N line and 2,300 ft. from W line of Sec. 35, Blk. 43, Twp. 2s, T.&P. Sur.
Rigged up.

Landreth Prod. Co.'s No. 1 Johnson, 440 ft. from N and W, Sec. 47, Blk. 43, Twp. 1s, T.&P. Sur.
Rigged up.

Landreth Prod. Co.'s No. 2-A Texas Pacific Land Trust, 441 ft. from N line and 440

(Continued on Page 53)



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DALLAS ST. LOUIS, MO. LOS ANGELES

Five Locations Staked for East Texas Wildcats in Widely Separated Counties During Week

By L. E. BREDBERG

DALLAS, Tex., Oct. 8.—The most interesting wildcat tests in the East Texas district have lost most of their appeal, either because of striking salt water or drilling below where they were expected to pick up possible oil saturations, consequently there is no especially interesting test now drilling in that district. No wildcats were abandoned during the week, but salt water showings will no doubt force some to be given up shortly.

There were five locations staked for wildcats in widely separated counties. One test is to be drilled by Dougherty and others on the S. Welch farm, in the A. Varelia Survey, 4 miles west of Groesbeck in Limestone County; Syam Oil Co. is to try again for oil in Navarro County, in an area in which several dry holes were drilled during the year. This test is to be on the Mrs. Ray farm, in the Stevenson Survey, 3 miles southwest of Rural Shade. Ben Lamb is to drill a Woodbine test on the H. Leath farm, in the L. J. Dooley Survey, 2½ miles east of Pirtle in Rusk County, and Paul S. Williams and others have location staked on the Dean farm in the Denson Moore Survey, 1 mile northeast of Bullard in Smith County. Joe Papadakis is to try again for production northwest of Gladewater in Upshur County, the new test to be on the Reynolds tract in the J. Davenport Survey, about 5 miles northwest of the city.

Cayuga District

There were four locations abandoned in the Cayuga Field, northwestern Anderson County, during the week. This field has practically been defined on all sides, and one of the locations abandoned was on the extreme southern end, on the Sullenberger lands. Two locations were staked inside the field by the two companies developing the jointly owned block, Tide Water Oil Co. and Texas Seaboard Oil Co.

Byrd-Frost, Inc., and others' No. 1 Burrows, in the Vasacue Survey, near the town of Slocum, in southern Anderson County, tested salt water at 5,402 feet and 5,510 feet and is drilling at 5,628 feet in hard blue shale, its chances of making a producer considered extremely thin. This is the second test drilled in this area by the same operators, the first being a dry hole although it picked up good oil and gas showings in sand.

Cherokee County

Zilkey, McCulloch and Sinclair Prairie Oil Co.'s No. 1 Bradford, in the J. Armendaris Survey, several miles northeast of the Rusk discovery well in Cherokee County, is coring below 5,155 feet, reports carrying the fact that the Sinclair Prairie Oil Co. took over the test at 5,000 feet.

The test of Byron and Jameson on the Mullineaux farm, in the T. M. Garrett Survey, 5 miles northwest of Maydell on the west side of Cherokee County, has attracted attention of the major companies, several of which have taken protection around the test. Pure Oil Co. formerly held a fair sized block to the west and southwest but relinquished most of the acreage some time ago.

Fault Line Fields

The two Trinity sand tests drilling in the old Fault Line fields at Mexia and Corsicana-Powell have also joined the list of uninteresting tests. The one at Mexia, drilled by Peyton Brothers on the Steubenrach farm, is drilling deeper after drilling plug and testing to 5,650 feet where it was plugged back from 5,706 feet. The Corsicana-Powell deep test, drilled by Wheelock and Collins, on the Cerf lands, tested salt water at 6,029 feet, showing no oil or gas, and is drilling below 6,410 feet. It cored white water sand from 6,378-85 feet, and appearances are not too encouraging.

Pete Wiggins of Dallas, and Lee I. Dodwell have derrick up and are moving in machinery on the Lasater lands in the Graham Survey, about 7½ miles southwest of Fairfield, in Freestone County. J. B. Daniel is contractor on the test which is expected to spud this week.

Rio Oil Corp. lost the hole on the Johnson farm, in the R. Hotchkiss Survey, 2½ miles east of Emory, and has skidded the rig 65 feet ready to spud on new hole. Total depth of the lost hole was 3,924 feet, but it was plugged back to 3,724 feet to sidetrack tools in an effort to complete the test in the first hole. However, this sidetracking job failed.

Limestone County

David Crawford has taken a 6,000-acre block centering in the W. M. Williams Survey, south of the V. V. Waite block, 3½ miles northwest of Thornton, Limestone County, on which a location has been staked, and is to drill in the near future. R. L. Chapman has taken a 4,000-acre block northeast of Kosse, in the Woods, Gentry and Raton Surveys, which will mean another wildcat test for Limestone County. Watson and Stewart of Fairfield have taken around 6,800 acres for a 2,000-foot test near Prairie Hill. The block centers in the Gillespie, Abbot, Walker, Rutledge, Scarbro and Holloway Surveys.

Southern Anderson is to get a test between Slocum and Salmon, according to reports, to be spudded at an early date about 3 miles northeast of Salmon on the D. L. Gibson farm in the W. T. Sadler Survey.

EAST TEXAS FIELD

There were 74 locations staked in the field this week, and 71 producers were completed.

The salt water situation is reported to have reached such a stage in the Gladewater area that illegal operators have tapped the city's sewage disposal system for running off salt water from their wells.

On October 1 the daily allowable of the field was cut 31,607 bbls. to 400,657 bbls. when the hourly potential was cut from 4 to 3.6 per cent. The hourly potential of the field, as of that date, was 10,949,820 bbls. for the 14,667 wells.

COMPLETIONS IN EAST TEXAS

Gregg County

Adams & Lyle's No. 10 Howard, top pay 3,620 feet, total depth 3,625 feet, initial production 20 bbls. in 20 minutes. Gulf Production Co.'s No. 31 Spears, top pay 3,548 feet, total depth 3,578 feet, initial production 60 bbls. per hour, open tubing; No. 15 Still, top pay 3,504 feet, total depth 3,552 feet, initial production 50 bbls. per hour. Texas Co.'s No. 30 Cole, top pay 3,520 feet, total depth 3,550 feet, initial production 85 bbls. Weaver-Crim's No. 6 Peterson, top pay 3,613 feet, total depth 3,637 feet, initial production 30 bbls. Arkansas Fuel Oil Co.'s No. 9 Adrian-McCrary, top pay 3,532 feet, total depth 3,557 feet, initial production 46 bbls. in 15 minutes; No. 6-B McKinley, top pay 3,605 feet, total depth 3,630 feet, initial production 25 bbls. in 15 minutes. Atchafalaya Oil Co.'s No. 5 Walker-Harrison, total depth 3,573 feet, initial production 90 bbls.

Atlantic Oil Producing Co.'s No. 63 Judge, top pay 3,503 feet, total depth 3,535 feet, initial production 80 bbls.; No. 64 Judge, top pay 3,516 feet, total depth 3,541 feet, initial production 85 bbls.; No. 65 Judge, top pay 3,500 ft., total depth 3,553 feet, initial production 86 bbls.; No. 12 Lee, total depth 3,627 feet, initial production 130 bbls.; No. 16 Moyer, total depth 3,585 feet, initial production 125 bbls. F.H.E. Oil Co.'s No. 13 Christian, top pay 3,688 feet, total depth 3,720 feet, initial production 36 bbls. in 20 minutes. Great Plains Oil Co.'s No. 4 Christian, top pay 3,595 feet, total depth 3,610 feet, initial production 58 bbls. through 1-inch choke.

Gulf Production Co.'s No. 59 Judge, top pay 3,529 feet, total depth 3,549 feet, initial production 60 bbls.; Humble Oil & Refining Co.'s No. 19 Mackey, dry and abandoned 3,666 feet. Lucey Petroleum Co.'s No. 7 McHaney-Loeb, top pay 3,523 feet, total depth 3,582 feet, initial production 20 bbls. in 15 minutes. Murphy, Trustee's No. 7 Doby, top pay 3,512 feet, total depth 3,552 feet, initial production 42 bbls. in 55 minutes. Oils, Inc., and others' No. 2 Bumpas, top pay 3,525 feet, total depth 3,563 feet, initial production 90 bbls.

Shell Petroleum Corp.'s No. 16 King, top pay 3,549 feet, total depth 3,617 feet, initial production 40 bbls. in 30 minutes. Stanolind Oil & Gas Co. and Simms Oil Co.'s No. 11 Aiken, total depth 3,624 feet, initial production 36 bbls. in 25 minutes. Sun Oil Co.'s No. 22 Haynes, total depth 3,638 feet, top pay 3,583 feet, initial production 42 bbls. in 30 minutes. Sutton and Hawkins' No. 7 Whittaker, top pay 3,499 feet, total depth 3,525 feet, initial production 80 bbls. Travis and Ware's No. 4 League, total depth 3,601 feet, initial production 60 bbls. Yount Lee's No. 9 Jones, total depth 3,506 feet, initial production 60 bbls. through eleven-sixteenths inch choke; No. 6-B Lathrop, total depth 3,563 feet, initial production 60 bbls. through eleven-sixteenths inch choke. American Liberty Oil Co.'s No. 33 Sabine River Bed, top pay 3,535 feet, total depth 3,551 feet, initial production 100 bbls.

Arkansas Fuel Oil Co.'s No. 6 Donaldson, top pay 3,571 feet, total depth 3,589 feet, initial production 32 bbls. in 15 minutes; No. 16 Hughey and Ross, top pay 3,531 feet, total depth 3,555 feet, initial production 80 bbls. Barnsdall Oil Co.'s No. 9-B Blank, top pay 3,624 feet, total depth 3,627 feet, initial production 65 bbls. Gulf Production Co.'s No. 59 Hilburn, total depth 3,554 feet, initial production 65 bbls.; No. 31 Spearks, top pay 3,548 feet, total depth 3,578 feet, initial production 60 bbls. Henry Oil Co.'s No. 6 Laird, top pay 3,557 feet, total depth 3,604 feet, initial production 70 bbls. Hughes' No. 5 Adkins, top pay 3,663 feet, total depth 3,667 feet, initial production 80 bbls. Humphreys' No. 3-B Spearks, top pay 3,535 feet, total depth 3,571 feet, initial production 60 bbls. through 1-inch choke. Magnolia Petroleum Co.'s No. 17 Hicks, top pay 3,678 feet, total depth 3,688 feet, initial production 88 bbls.

Martin's No. 2-A Elder, top pay 3,531 feet, total depth 3,575 feet, initial production 20 bbls., swabbing. Paul Miller's No. 3 Crim, total depth 3,578 feet, initial production 320 bbls. in four hours. Sultana Oil Co.'s No. 1-E Sabine River Bed, top pay 3,525 feet, total depth 3,552 feet, initial production 100 bbls.

East Central Texas Wildcats

Week Ending October 6

ANDERSON COUNTY

Byrd-Frost, Inc.'s No. 1 J. T. Burrow, 250 ft. N of S line, 25 ft. E of W line of M. Vascue Sur.
T.S. 5,392 ft.; coring 5,566 ft.

J. W. Luttes' No. 1 C. McKee, 357 ft. from S line, 340 ft. from W line of 100-ac. tract W. F. Pool Sur., SE of Frankston Sur.
Derrick.

F. L. Stone et al's No. 1 Tullis, 1,513 ft. from E and 1,000 ft. from S lines of Wm. Johnson Sur., 5 miles S of Rusk.
Derrick.

BOWIE COUNTY

Tex-Ark. Oil Co.'s No. 1 Hamilton Estate, 600 ft. E and 350 ft. N lines, J. Milan Sur., 4 miles S of Red River.
Derrick.

CHEROKEE COUNTY

H. L. Hunt Production Co.'s No. 1 Powell Lumber Co., 467 ft. from S and W lines of 52-ac. tract, 1 mile E and one-quarter mile N of discovery well, D. W. McNab Sur.
Location.

Jackson Oil & Gas Co.'s No. 1 H. D. Henderson, 660 ft. from N and W line of 40-ac. tract out of Tankersley 104-ac. tract, 5 miles NE of Jacksonville on W side of railroad, J. Pineda Sur.
Drlg. 520 ft.

Guy Jameson et al's No. 1 Mullineaux, cen. 20-ac. tract out of NW cor. of SE of T. M. Garrett Sur., 5 miles NW of Maydell.
Location.

South Gulf Oil Co.'s No. 1 Joe Bailey, center 164-ac. tract, 4 miles NE of Ponta, L. R. Rhodes Sur., Abstract No. 734.
S.D. 4,397 ft.; ran Schlumberger.

E. M. Thomason et al's No. 1 Addis Estate, 250 ft. S of survey and 150 ft. E of railroad, J. T. Jones Sur., 6 miles NW Alto.
Spudded.

Wilson Stubbs Oil Co.'s No. 1 Rowborts, 450 ft. from S line, 150 ft. from W line of 100-ac. tract, 3 miles SW of Jacksonville, J. D. Wolfin Sur.
S.D. 1,550 ft.

T. J. Wood et al's No. 3 New Birmingham Dev. Co., 660 ft. N and 330 ft. E of No. 1, Levi Jordan Sur.
Location.

Zilkey and McCulloch's No. 1 Bradford, 2,500 ft. from most southerly S line and 771 ft. from E line of survey, 4 miles E of Rusk, J. Armendaris Sur.
Drlg. 4,615 ft.

ELLIS COUNTY

Beckner-Finley et al's No. 1 Coker, 2,900 varas along S line of grant from river and 1,700 varas N at R/A, R. De La Pena Sur.
Shut down.

FANNIN COUNTY

L. Kean et al's No. 1 L. M. Boyd, 900 ft. from E line and 200 ft. from N line of survey, W. Hunt Sur.
Pipe stuck 2,503 ft.

FREESTONE COUNTY

Burris' No. 1 R. J. Johnson, NE cor. of a 95-5-ac. tract, W. M. C. Jones Sur.
S.D. 1,000 ft.

Hailey-Young's No. 1 Cochran, 400 ft. N and W lines, D. Bullock Sur., 1 mile SE of Lima.
Location.

E. L. Smith et al's No. 1 Reimple, 460 ft. out of NE cor. A. G. Smith Sur., 4½ miles S of Dew.
Derrick.

J. E. Wilburn's No. 1 S. McShan, 4,000 ft. from NWL and 5,000 ft. from NEL of survey, G. Diaz Sur.
S.D. 171 ft.

HENDERSON COUNTY

Campbell and Chamberlain's No. 1 R. Ansley, 1,724 ft. W and 300 ft. S of SE cor. of M. Matthews Sur., N. H. T. Thompson Sur.
S.D. 2,650 ft.

Cosden Oil Co.'s No. 1 Hunt & Miller, 990 ft. from N and 1,340 ft. from W lines of J. D. Hays Sur., 11 miles S of Chandler.
Spudded.

Crosby and Pulp's No. 1 M. T. Dobbs, NW cor. of east Dobbs 100-ac. tract, 4 miles E of Malahoff and S of Railroad, Georg Aldrick Sur.
S.D. 3,118 ft.

HOPKINS COUNTY

D. A. Hale et al's No. 1 L. M. Hall, 200 ft. from N and E lines of 70a-c. tract, 1 mile SE of Miller Gros. A. Caro Sur.
S.D. 640 ft.

(Continued on Page 54)

No. 1-G Sabine River Bed, top pay 3,519 feet, total depth 3,548 feet, initial production 100 bbls. Sun Oil Co.'s No. 12 Rollins, top pay 3,571 feet, total depth 3,604 feet, initial production 70 bbls. Texas Co.'s No. 30 Cole, top pay 3,520 feet, total depth 3,550 feet, initial production 85 bbls.; No. 6 Walker, top pay 3,586 feet, total depth 3,591 feet, initial production 45 bbls. Weaver-Crim Oil Co.'s No. 6 Peterson, top pay 3,616 feet, total depth 3,637 feet, initial production 30 bbls. in 15 minutes.

Rusk County

Gulf Production Co.'s No. 13 Sexton, top pay 3,643 feet, total depth 3,714 feet, initial production 35 bbls. through three-quarters inch choke. Houston Oil Co.'s No. 5 Brightwell, top pay 3,592 feet, total depth 3,600 feet, initial production 20 bbls. in 10 minutes. Humble Oil & Refining Co.'s No. 11 Minor, top pay 3,684 feet, total depth 3,689 feet, initial production 28 bbls. in 20 minutes. Atlantic Oil Producing Co.'s No. 4-B Giles, total depth 3,733 feet, initial production 91 bbls. Dearing & Son's No. 1 Pinkston, top pay 3,504 feet, total depth 3,565 feet, initial production 45 bbls. Fisher's No. 1 Wilson, top pay 3,711 feet, total depth 3,780 feet, initial production 20 bbls. in 20 minutes.

Gulf Production Co.'s No. 5 Johnson, total depth 3,773 feet, initial production 60 bbls. through three-quarters inch choke. Humble Oil & Refining Co.'s No. 10 Arnold, top pay 3,746 feet, total depth 3,792 feet, initial production 32 bbls. in 30 minutes; No. 35 Blackwell, top pay 3,642 feet, total depth 3,652 feet, initial production 71 bbls.; No. 32-B Ploughman, total depth 3,707 feet, initial production 82 bbls. Octo Oil Co.'s No. 3-B Cox, top pay 3,660 feet, total depth 3,743 feet, initial productiin 20 bbls. Shell Petroleum Corp.'s No. 11-A Brooks, total depth 3,746 feet, initial production 35 bbls. Stanolind Oil & Gas Co.'s No. 2 McCord, total depth 3,622 feet, initial production 20 bbls. in 24 hours, swabbing; No. 2 Wooley, total depth 3,581 feet, initial production 20 bbls. in three hours, swabbing.

Trees Oil Co.'s No. 1 Alford, top pay 3,618 feet, total depth 3,698 feet, initial production 30 bbls.; No. 3 Deason, top pay 3,630 feet, total depth 3,688 feet, initial production 40 bbls. through three-quarters inch choke.

Smith County

Byers' No. 2 Jackson, top pay 3,814 feet, total depth 3,818 feet, initial production 100 bbls. Magnolia Petroleum Co.'s No. 21 Wright, top pay 3,710 feet, total depth 3,720 feet, initial production 20 bbls. in 15 minutes. Manahan Drilling Co.'s No. 5 Cook, top pay 3,747 feet, total depth 3,750 feet, initial production 25 bbls. in 10 minutes. Wainwright-West's No. 2 Irion, total depth 3,748 feet, initial production 75 bbls.

Upshur County

Eastern Texas Petroleum Co.'s No. 1-B Ray, top pay 3,604 feet, total depth 3,607 feet, initial production 20 bbls. in 15 minutes. Humble Oil & Refining Co.'s No. 14 Johnson, total depth 3,704 feet, initial production 60 bbls; No. 27 Smith, top pay 3,620 feet, total depth 3,648 feet, initial production 43 bbls. Lacey Roger's No. 1 Ray, total depth 3,616 feet, initial production 40 bbls. Magnolia Petroleum Co.'s No. 1 Bell, top pay 3,655 feet, total depth 3,659 feet, initial production 125 bbls.

MICHIGAN BOAT SHIPMENTS

The Allied Steamship Co. tanker, Crudoil, left Muskegon Wednesday, October 3, with a cargo of 16,500 bbls. of fuel oil, the fifth shipment of refined products by boat from the Old Dutch Refining Co. to the Detroit-Toledo-Cleveland marketing center this season.

One more shipment is planned later this month before the close of the navigation season, it was stated by Old Dutch officials. The present cargo will be placed in storage at Cleveland for distribution during coming months by the Allied Oil Co.

West Texas Fields

(Continued from Page 48)

tial production 12 bbs. Perkins and Cullums' No. 12-B Falls County, top pay 1,114 feet, total depth 1,128 feet, treated and shot, initial production 175 bbls.; No. 15-C Falls County, top pay 1,152 feet, total depth 1,169 feet, initial production 50 bbls. after treated and shot. Petroleum Producers Co.'s No. 4 Harmonson, top pay 962 feet, total depth 975 feet, initial production 150 bbls. Staniforth and Ray's No. 13 Wilson, location abandoned. Texas Co.'s No. 1 Andrews, dry and abandoned at 1,010 feet.

Clay County

Texas Co.'s No. 1 Scott, dry and abandoned 1,417 feet.

Cooke County

Texas Co.'s No. 1 Truenback, top pay 1,415 feet, total depth 1,421 feet, initial production 22 bbls. per hour.

Jack County

V. Clopton's No. 1 Gay estate, dry and abandoned at 602 feet. Rosser & Volk's No. 1 Brumblebow, dry and abandoned at 500 feet.

Montague County

Continental Oil Co.'s No. 1 Chancy, dry and abandoned at 2,258 feet.

Wichita County

King Royalty Co.'s No. 1-I Waggoner, top pay 1,963 feet, total depth 1,974 feet, initial production 250 bbls. Petroleum Producers Co.'s No. 44 Allen and Kemp, top pay 453 feet, total depth 463 feet, initial production 20 bbls. Sullivan's No. 1 Waggoner and others, dry and abandoned at 1,254 feet. Bonner Co.'s No. 5 Allen & Kemp, dry and abandoned at 1,651 feet. E. P. Waggoner's No. 3-C Waggoner, top pay 1,547 feet, total depth 1,555 feet, initial production 100 bbls. Walton's No. 1 Granger, top pay 430 feet, total depth 437 feet, initial production 5 bbls.

Young County

Hones' No. 4 fee, top pay 912 feet, total depth 918 feet, initial production 40 bbls. day. Wooten and Reed's No. 2 Reed, dry and abandoned 570 feet.

PANHANDLE COMPLETIONS

Carson County

Stanolind Oil & Gas Co.'s No. 2 McConnell, dry and abandoned 3,065 feet.

Gray County

Danworth Oil Co.'s No. 3 Webb, top pay 2,580 feet, shot 180 quarts from 2,580-2,622 feet, total depth 2,688 feet; plugged back to 2,681 feet; initial production 266 bbls. day, pumping. Dixon Creek Oil Co.'s No. 7 Archer, top pay 3,182 feet, total depth 3,240 feet, shot 210 quarts from 3,174-3,234 feet, initial production 255 bbls., pumping. Magnolia Petroleum Co.'s No. 3 Haggard, top pay 3,255 feet, total depth 3,293 feet, initial production 138 bbls. day, pumping. Niapa Oil Corp.'s No. 1 Cole-Tidal, total depth 3,321 feet, plugged back to 3,306 feet, shot 400 quarts from 3,240-3,306 feet, initial production 49 bbls., pumping. Phillips Petroleum Co.'s No. 8 Fox, top pay 2,860 feet, total depth 2,986 feet, initial production 878 bbls., pumping. Wilcox Oil & Gas Co.'s No. 32 Combs-Worley, top pay 2,879 feet, total depth 2,934 feet, initial production 85 bbls. day, pumping.

Hutchinson County

Huber Petroleum Co.'s No. 2-A Bennett, gas pay 2,396 feet, total depth 2,520 feet, initial production 22,800,000 feet of gas. Means and Risher's No. 1 Cooper, top pay 3,117 feet, total depth 3,237 feet, shot 250 quarts from 3,137-3,232 feet, initial production 54 bbls. oil and 90 bbls. of water. Phillips Petroleum Co.'s No. 3 Jordan, top pay 3,000 feet, total depth 3,032 feet, initial production 283 bbls., pumping; No. 3 Yake, top pay 2,890 feet, total depth 2,922 feet, initial production 217 bbls. day, pumping.

Wheeler County

Elbar Corp.'s No. 4 Noel, top pay 2,400 feet, total depth 2,441 feet, initial production 185 bbls. day, pumping. Humble Oil & Refining Co.'s No. 4 Koons, dry and abandoned 2,406 feet. Smith Brothers' No. 3 Harlan, top pay 2,446 feet, total depth 2,499 feet, initial production 1,336 feet; No. 1 Plummer, top pay 2,464 feet, total depth 2,547 feet, plugged back to 2,519 feet, initial production 40 bbls. day. Shell Petroleum Corp.'s No. 3 Bush, top pay 2,320 feet, total depth 2,475 feet, initial production 781 bbls. day.

Preliminary Program, Fifteenth Annual Meeting of A.P.I.

(Continued from Page 14)

Thursday, November 15, 1934

GROUP SESSION

9 A.M.

DIVISION OF PRODUCTION

Drilling and Production Practice—Baker, Mezzanine Floor, Crystal Ballroom

(Sponsored by the Central Committee on Drilling and Production Practice)

Papers on following subjects are now under consideration by the Program Committee:

Methods of Evaluating Service Rendered by Expendible Equipment.

Pressure Changes in East Texas Under Different Rates of Flow.

Paper on Research Project 37—Application of Thermodynamic Data to Production Problems.

Statistical Appraisal of Probabilities of Discovery by Wildcat.

Report of Division's Nominating Committee, M. B. Sweeney, Sun Oil Co., chairman.

Election of Twenty Members of the General Committee of the Division of Production.

GROUP SESSION

10 A.M.

DIVISION OF REFINING

Refining Session—Adolphus, Fifteenth Floor, White Room

Nomographs for A.P.I.-A.S.M.E. Code for Unfired Pressure Vessels, M. E. Clawson and T. O. Duller, Continental Oil Co.

Recent Developments in Propane-Refining Technique, Robert E. Wilson, Standard Oil Co. (Indiana), and P. C. Keith, Jr., M. W. Kellogg Co.

Report of Committee on Viscosity Standards, T. G. Delbridge, Atlantic Refining Co., chairman.

Report of Division's Nominating Committee, Walter Miller, Continental Oil Co., chairman.

Election of Twenty Members of the General Committee of the Division of Refining.

GROUP SESSION

10 A.M.

DIVISION OF MARKETING

Highways and Markets—Adolphus, Twenty-first Floor, Roof Garden

Program of papers for this session to be announced.

Report of Division's Nominating Committee, Charles L. Suhr, Pennzoil Co., chairman.

Election of Twenty Members of the General Committee of the Division of Marketing.

Note—Business sessions on Thursday will conclude at noon, and the afternoon will be devoted to golf.

8 P.M.

Annual Dinner—Baker, Crystal Ballroom; Adolphus, Junior Ballroom

Two dinners will be held simultaneously in both hotels. Program is being arranged by the Dallas Local Committee.

Friday, November 16, 1934

Barbecue—"Bill" Boyd's Lodge, located between Teague and Fairfield, Tex.

The commercial organizations of Teague and Fairfield, in co-operation with local oil men, extend to all members of the American Petroleum Institute a cordial invitation to attend an old-fashioned country barbecue, to be given in honor of William R. Boyd, Jr., executive vice president, at 2 o'clock on Friday afternoon, November 16.

Petroleum Division of A.I.M.E. to Meet in Tulsa

(Continued from Page 14)

latest developments in the Mid-Continent area, such as the Lucien, Crescent and Fitts pools. Trips through the various refineries of the vicinity will also be provided for visiting oil men. L. L. Foley, production engineer, Marathon Oil Co., Tulsa, is in charge of these trips and reservations should be made through his committee.

Officers of the petroleum division and chairmen of committees for the meeting are as follows:

Chairman, H. D. Wilde, Jr., associated chairman, V. H. Welhelm; secretary-treasurer, Eugene A. Stephenson.

Production engineering—Vice chairman, Harry H. Power; associated vice chairmen, M. Albertson, Robert R. Boyd, Donald R. Knowlton.

Production—Vice chairman, Frank A. Herald; associated vice chairman, J. Terry Duce.

Economics—Vice Chairman, Clarel B. Mapes.

Engineering research—Vice chairman, F. B. Plummer.

Refinery engineering—Vice chairman, Walter Miller.

Stabilization committee — Chairman, Earl Oliver.

Arrangement Committees

General—Harry F. Wright, chairman; vice chairmen, H. H. Wright, L. G. E. Bignell.

Meeting—J. R. McWilliams, chairman.

Registration—J. M. Alden, chairman.

Dinner and entertainment—R. T. Lyons, chairman.

Publicity—W. F. Lowe, chairman.

Field trips—L. L. Foley, chairman.

The national officers of the A. I. M. E. are: President, Howard N. Eavenson; past presidents, Scott Turner and Frederick M. Becket; first vice presidents, Eugene McAuliffe, Paul D. Merica, Henry Krumb, Edgar Rickard and Louis S. Gates; secretary, A. B. Parsons; assistant secretary, Edward H. Robie, and treasurer, Karl Eilers.

Draft of Legislation for Interstate Compact

(Continued from Page 18)

the legislature and by the Congress of the United States.

Statute Not Preceded by Federal Authorization

An act authorizing the negotiation of an interstate agreement or compact for the conservation and stabilization of the American petroleum supply.

Be it enacted, etc.

Section 1. The governor of this state is authorized to appoint a representative to meet with representatives of the states of ..... for the purpose of negotiating an agreement or compact for the conservation and stabilization of the American petroleum supply, and to that end to draft an agreement embodying all or any of the following objectives:

(a) The creation of an interstate fact-

finding agency for the periodical forecasting of demand and recommendation of quotas of production to be supplied by each state to meet such demand.

(b) A method for the voluntary regulation of production by each compacting state in accordance with the quota so found.

(c) Provisions for the adequate control of importations by the United States.

(d) The exercise by the interstate fact-finding agency of such incidental powers as may be agreed upon.

Sec. 2. Such agreement or compact, if one is made, may be in the form of reciprocal legislation which the representative of this state shall recommend to the consideration of the legislature, or in the form of an instrument to be signed by the representatives of the compacting states.

Sec. 3. No agreement or compact authorized by this act shall bind this state unless and until it shall be ratified by the legislature and by the Congress of the United States.

Executive Assistant for Administrator Ickes

(Continued from Page 8)

Federal Judge Bryant has been quoted as hinting that if suits to enjoin such transportation were brought before him he would grant the injunction. As yet no such suits have been brought, but, before the week is out it should be possible to know whether an injunction will lie for transporting "hot" oil in interstate commerce.

A Federal grand jury also convenes in East Texas this week. There will probably be presented to this jury several criminal charges of running and transporting illegal oil. Conviction for such an offense carries a penalty of $500 fine, and/or six months imprisonment. The fine and imprisonment is not such a large penalty, but it is not believed many Texas oil men, even those producing "hot" oil, would care to languish in any penitentiary for that period of time.

Hope that the oil administration officials will clean up the situation concerning "hot" oil is still entertained, but such thoughts are tinged with the fear that perhaps this is just another effort which will prove fruitless. The impression here is that if this latest expedition fails the petroleum administration is impotent, under the law. It is generally believed that under Section 9(c) of the National Industrial Recovery Act lies the logical solution of the "hot" oil problem.

Tankers Held on East Coast

The recent success of the petroleum administration in controlling the unloading of the tankers Papoose and Republic on the West Coast has opened a new avenue of enforcement for the Government. This method is now being used on the East Coast against the tanker Pueblo, which was supposed to dock at Cartaret, N. J., with a cargo of gasoline. It is claimed by the petroleum administration that the gasoline has been produced in violation of both state and Federal laws.

A temporary injunction was granted by United States District Judge Sorman at Trenton, N. J., last Saturday which prevents the unloading of this cargo until it is clearly shown the gasoline is legal. Reports from oil administration officials, however, state that evidence is in their hands which shows conclusively that the major part of the 45,570 bbls. aboard is illegal.

The evidence concerning the legality of the cargo was rushed from Texas to Trenton by plane in order for it to be introduced before the court. Kenneth Fairchilds, an agent of the Division of Investigations, made the trip.

A temporary restraining order to prohibit the unloading of the cargo of the tanker Phoenix at Bayonne, N. J., has been obtained by the oil administration and the Department of Justice. The 76,000 bbls. of gasoline aboard is alleged by the Government to have been produced from hot oil. The consignee of the oil was not disclosed.

Order on Withdrawals

The Planning and Coordination Committee has been notified of the approval by Administrator Ickes, on September 27 of an order "that there shall be no net withdrawals of crude oil from storage during the months of October, November and December, 1934, except in special cases upon the recommendation of the Planning and Coordination Committee, and the approval of the petroleum administrator. The period from October 1, 1934, to December 31, 1934, inclusive, shall constitute the reckoning period for the determination of net withdrawals."

HURTS SMALL RETAILER

RICHMOND, Va., Oct. 8.—The purchase of gasoline in car lots by the Virginia State Highway Department and its distribution among the state agencies has proved costly to small oil marketers. This action was taken after refiners and marketers refused to submit bids to the commission in March, at which time unusual restrictions were placed in the terms of the bid.

Carter Oil Co. Enters Fitts Area in Big Deal

The Carter Oil Co., subsidiary of the Standard Oil Co. of New Jersey, and with headquarters in Tulsa, bought 520 acres of leases in the Fitts area in southern Pontotoc County, Oklahoma, from W. A. Delaney and B. C. King of Ada, Okla., and Sam S. Miller of Tulsa, for a consideration not divulged but believed to have run into several million dollars. The properties include the N half SW Section 28-2-7, 80 acres; 60 acres of the N half NW Section 33-2-7, Skelly Oil Co. owning the remaining 20 acres; NW SW Section 33-2-7, 40 acres; NE NE Section 31-2-7, 40 acres; SE Section 30-2-7, 160 acres; E half SW Section 30-2-7, 80 acres; SE NE Section 25-2-6, 40 acres; N half SE SE Section 25-2-6, 20 acres.

Gossip as to the terms of the deal has it that Messrs. Delaney, King and Miller were paid a substantial flat sum in cash the balance of the payment price to be made in 25 annual installments bearing 3 per cent interest. However, as neither party to the deal would say what price and terms were, the gossip may be taken for what it is worth.

One Wilcox sand oil well in Section 25 and two gas wells in Section 30-2-7 were included in the deal.

Carter Oil Co. was highest bidder for four parcels of state school land offered for oil and gas leases by the State Monday; the tracts are in Coal County and south of a block of leases on which the Carter Oil Co. is buying from the Ramsey Petroleum Co.

Carter Oil Co. bid $364.00 for the W half SE SW Section 6-2n-9e, being 20 acres; and $911.50 for 50 acres in the SE NW NE and SW NE of Section 7-2n-9e; and $1,346.01 for 73.89 acres in the NE SW and Lot 3 of Section 7-2n-9e, and $1,093.80 for 60 acres in the NW NE and N half SW NE of Section 16-2n-9e.

Other tracts in Coal and Pontotoc Counties had low bids which were rejected.

Hearing has been set for October 23 on conservation rules for the John Fitts Field, on petition of W. J. Armstrong, state umpire and chief conservation officer of the corporation commission.

No contest is expected since operators have virtually agreed among themselves the practices to be followed in getting through the big gas horizon at shallow depth, and on means of handling the gas in solution with the oil.

PIPE LINE CONSTRUCTION

PROPOSED 55-MILE GAS LINE

LONDON, Ontario, Oct. 6.—W. H. Duffield, vice president and general manager of the City Gas Co., has submitted to a committee of the London city council details of a project for supplying the city with natural gas through a 55-mile line from the Dawn gas field. The cost of the line is estimated at $1,000,000.

The City Gas Co. is a subsidiary of the Union Gas Co. of Canada, Ltd. The Dawn gas field is about 12 miles long and has 20 producers out of 78 tests drilled. The production is now supplementing the gas supply for Sarnia, Petrolia and other communities in Lambton County served by the Union Co.

TWELVE-MILE ONTARIO LINE

CHATHAM, Ontario, Oct. 8.—Southern Ontario Gas Co. will lay 12 miles of 6-inch line from its main line to the Dover Field, Kent County, Ontario, Canada, to take production from F. H. Stover & Sons' No. 1 gasser, recently finished with a shot production of over 4,000,000 feet a day.

CONTRACT AWARDED

The Apex Construction Co., Houston, Tex., subsidiary of Williams Brothers, Inc., Tulsa, pipe line contractors, have been awarded a contract by the city of Zachary, La., for the construction of a city natural gas distributing system that involves the laying of 32,920 feet of 2-inch welded and 6,150 feet of 1-inch welded pipe. In addition to laying the pipe, 150 service connections are to be provided, with the setting of 75 gas meters and 75 regulators. This work is to be started at once and completed as quickly as possible.

BIDS RECEIVED

Lone Star Gas Co., Dallas, Tex., has received bids on approximately 70 miles of 12-inch welded line pipe for their new line to be laid between Long Lake, Anderson County, Tex., to Riesel, in McLennan County, Texas. The contract has not been let, but it is understood that it will be soon.

TEXAS GAS LINES

Texas Gas Utilities Co., Del Rio, Tex., has recently contracted with N. A. Saigh Co., Builders Exchange Building, San Antonio, Tex., to lay a 4-inch welded steel pipe line for natural gas from the fields in Zavalla County to Uvalde, Tex., a distance of about 12 miles. Reported cost of the project is about $50,000.

F. C. Henderson Co., Amarillo, Tex., having been granted permission to erect two new carbon black plants near Stanford, Tex., in the Panhandle gas fields, now plans to build a steel pipe line for the supply of natural gas for these plants.

MICHIGAN GAS LINE

MUSKEGON, Mich., Oct. 8.—American Michigan Pipe Line Co. has completed about one-fourth of its 55-mile pipe line between Muskegon and the Austin Township, Mecosta County Field. Nearly 2 miles was laid in a single day on this line scheduled to be completed about November 15.

HIDALGO-CORPUS CHRISTI LINE

CORPUS CHRISTI, Tex., Oct. 8.—The Duval Pipe Line Co., buyers of crude in the Duval section, has started work on a pipe line gathering system for the Mission Field which is attracting attention through its Otto Woods' No. 1 John Lawrence discovery. Announcement of the development was made by George B. Eggleston, vice president of the pipe line company.

The company has posted a price of 60 cents a barrel for crude oil at the well. Crude from the field will be brought to the port at Corpus Christi for coastwise and export shipments. It will be handled through the General American Tank & Storage Co. In addition to the 4-inch pipe which the company is laying it will construct a storage tank and loading rack. The line, when completed, will have a capacity of approximately 10,000 bbls. daily and will extend from producing wells in the field to the Missouri Pacific Railroad lines at Mission.

NORTH TEXAS LINE

FORT WORTH, Tex., Oct. 8.—Waggoner Refining Co. has resumed its takings of crude in the area around Electra, and Magnolia Petroleum Co. has become more aggressive in the district, the Associated Pipe Line Co. now laying 8 miles of 4-inch line from its station in Section 32, Bell County school lands, near Megargel in Archer County, to the southwest corner of Fain and McGaha's Green lease in the Joseph Levins Survey in the Anarene sector. It will take around 900 bbls. per day that the Continental Oil Co. has been running, and another 1,000 bbls. the Texas Co. has been taking.

Humble Pipe Line Co. has taken up 12 miles of 2-inch line from its Serrien Station south to its Mitchell station, southwest of Iowa Park in Wichita County. This line has been unused for some time.

QUEBEC GAS PROJECT

MONTREAL, Quebec, Oct. 6.—The Cartier Natural Gas Co., Ltd., Montreal, has been incorporated to take over the interests of the Lanoraie Oil & Gas Syndicate. The Lanoraie syndicate holds the right to drill for oil and gas on 85,000 acres in the counties of Laprairie, Chambly, Vercheres, Richelieu, Berthier and Joliette, on the north shore of the St. Lawrence east of Montreal. Several shallow wells drilled have yielded some gas production, and further drilling is planned. Officers of the Cartier Natural Gas Co. are: President, Hon E. Michener; vice president, A. George Blair, K.C.; managing director, R. A. Sibbit. Field operations are under the supervision of C. E. Michener, M.Sc.

CETENE AVAILABLE FOR TESTS

In accordance with arrangements made with the chairman of the volunteer group for fuel research of the American Petroleum Institute, the E. I. du Pont de Nemours & Co. has completed the production of an initial supply of a standardized grade of cetene for use in evaluating Diesel fuels. The price is $15 per gallon f.o.b. the company's plant at Carney Point, N. J. The main offices of the company are located at Wilmington, Del.

G. A. KRAMER DIES

NEW YORK, Oct. 8.—G. A. Kramer, assistant to the vice president in charge of the manufacturing department of the Shell-Union Oil Corp., died in a local hospital October 5, following a brief illness. Mr. Kramer came to the New York offices of the Shell-Union a year ago. Previously he had been employed by the Shell interests for several years in California and other sections.

CANADIAN CARBON PLANT

CRAIGMYLE, Alberta, Oct. 6.—Arrangements have been made by the Pioneer Carbon Black Co., Ltd., to start work on its new carbon black plant here by December 1. The company has a daily production of 1,000,000 feet of sweet dry gas available, and two additional wells will be drilled.

STRATHROY GAS PROPOSITION

STRATHROY, Ontario, Oct. 6.—The town council of Strathroy has appointed a committee to negotiate with the Union Gas Co. of Chatham for a gas supply for the municipality, which lies within a short distance of the probable route of the proposed new pipe line from the Dawn gas field to London.

ROCKY MOUNTAIN FIELDS

Following is the estimated daily average production of the Rocky Mountain fields for the week ended October 6:

	Bbls.
WYOMING	
Salt Creek	18,150
Big Muddy	1,800
Badger Basin	30
Byron	470
Dallas Derby	330
Dutton Creek	80
Elk Basin	540
Ferris	20
Frannie	2,200
Garland	1,350
Grass Creek	600
Greybull	10
Hamilton Dome	990
Hudson	210
LaBarge	1,560
Lance Creek	400
Lost Soldier	1,620
Mule Creek	shut in
Midway	100
Notches	shut in
Oregon Basin	3,490
Osage	750
Pilot Butte	30
Rex Lake	80
Rock River	1,440
South Casper	590
Poison Spider	230
Teapot	20
Total	37,070
MONTANA	
Buckley-Border	250
Cat Creek	620
Cut Bank	4,000
Dry Creek	.....
Kevin-Sunburst	5,580
Lake Basin	40
Pondera	800
Total	11,290
COLORADO	
Florence	180
Fort Collins and Wellington	480
Iles Dome	2,340
Moffat	450
Orchard	110
Rangely	90
Tow Creek	190
Total	3,840
NEW MEXICO	
Artesia	570
Cooper Area	760
Empire Area	100
Eunice Area	3,450
Getty Pool	.....
Hobbs	32,990
Hogback	230
Hospah	shut in
Jal	3,060
Lea Area	1,760
Jackson	1,500
Maljamar	370
Rattlesnake	720
Table Mesa	90
Total	45,690
Total Rocky Mountain Region	97,890

OFFICIALS OPEN NEW WAR

Officials of the District of Columbia and of the State of Virginia co-operatively have started a drive to end gasoline bootlegging between Washington, D. C., and Virginia and to prevent loss of revenue through evasion of motor fuel taxes.

Border patrols, paticularly on the Potomac River, were planned at a recent conference after preliminary investigations had revealed the motor fuel was being bootlegged by boat and motor truck. One arrest disclosed gasoline containers concealed in chicken crates. Due to 5-cent taxes in Virginia and a price war in Washington, where the tax is 2 cents per gallon, bootleggers and tax evaders apparently have found a profitable business in buying motor fuel at the low Washington prices and smuggling it into Virginia.

An interesting development in the situation is seen in the possibility of Federal prosecution, gasoline tax evasion being a direct violation of the national petroleum code. It is estimated that in the past few months millions of gallons of gasoline have escaped taxation in Virginia, and it is believed that motor fuel also is being smuggled into Maryland, where the tax is 4 cents.

J. L. McMURRAY DIES

J. L. McMurray, 37, Cisco, Tex., oil operator and member of the firm of Gilman & McMurray, died in that city on October 3 after a heart attack. He was born at McAlester, Okla.

HUBERT NOBLE DIES

Hubert Noble, 68, president of the Cordova Union Oil Corp., producer in the West Texas Permian Basin, Runnels County, Young County and East Texas, died in New York, last week.

West Texas Wildcats

(Continued from Page 48)

ft. from W line of Sec. 3, Blk. 43, Twp. 1s, T.&P. Sur.
T.D. 4,275 ft.; plugged back 4,248 ft.; Making 10 bbls. per day.

Landreth Prod. Co.'s No. 1 Clarence Scherbauer, 660 ft. from S and E. lines of Sec. 20, Blk. 44, Twp. 1n. T.&P. Sur.
T.D. 4,052 ft.; killing 20,000,000 ft. of gas.

Phillips Pet. Co.'s No. 1 Kioh, 440 ft. from E line and 440 ft. from S line, Sec. 3, Blk. 43, Twp. 1s, T.&P. Sur.
T.P. 4,090 ft.; T.D. 4,286 ft.; to test.

Shell Pet. Corp.'s No. 3 Jones, 2,310 ft. from S line, Sec. 6, Blk. 44, Twp. 3s, T.&P. Sur.
T.D. 3,695 ft.; flowed 164 bbls. in 24 hrs.

Skelly Oil Co.'s No. 1 Scarborough, 617 ft. from S and 660 ft. from E, Sec. 26, Blk. B-15, P.S.L. Sur.
Drlg. 2,915 ft.

Skelly Oil Co.'s No. 5-A University, 660 ft. from N and 1,980 ft. from E, Sec. 1, Blk. 35, University Sur.
Drlg. 3,700 ft.; T.P. 3,575 ft.; flowing.

Stanolind Oil & Gas Co.'s No. 8 J. M. Cowden, 440 ft. from S line and 440 ft. from W line, Sec. 34, Blk. 43, Twp. 1n.
S.D. 280 ft.

Stanolind Oil & Gas Co.'s No. 9 J. M. Cowden, 440 ft. from S line and 2,300 ft. from E line, Sec. 34, Blk. 43, Twp. 1n, T.&P. Sur.
T.D. 4,250 ft.; 317 bbls. in 1 day.

Sun Oil Co.'s No. 1 Wight, 2,200 ft. from S line, 440 ft. from W line, Sec. 2, Blk. 43, Twp. 1s, T.&P. Sur.
Fishing 4,212 ft.

EDWARDS COUNTY

Harry Adams' No. 1 Holman, 1,650 ft. from N and 330 ft. from E, Sec. 22, C.C.S.D. &R.G.N.G. Sur.
Ran csg. 460 ft.

EL PASO COUNTY

Mesa Oil Co.'s No. 1 Coronado Valley.
S.D. 1,225 ft.

FISHER COUNTY

Merry Bros. and Perrini, Inc., et al's No. 1 Dean, 660 ft. from S and E, Sec. 2, Blk. R., W. E. Richardson Sur.
Drlg. 1,615 ft.

Texas Co.'s No. 2 Daniels, 330 ft. from N and W, Sec. 194, Blk. 1, B.B.B.&C. Sur.
Drlg. 3,100 ft.

Texas Co.'s No. 1 First National Bank of Rotan, 330 ft. N and E of the NW cor. of Sec. 210, B.B.B.&C. Sur.
Fishing 3,020 ft.

GLASSCOCK COUNTY

John I. Moore et al's No. 1 J. S. McDowell, 1,980 ft. from N line and 660 ft. from E line of Sec. 22, Blk. 34, Twp. 2s, T.&P. Sur.
Drlg. 4,205 ft.

Wahlenmaier Pet. Corp.'s No. 1 Boyd, 990 ft. from N and E, Sec. 9, Blk. 36, Twp. 5s, T.&P. Sur.
Drlg. 225 ft.

HOWARD COUNTY

Fred Hyer et al's No. 1 Clay, 2,310 ft. from N and 330 ft. from E, Sec. 126, Blk. 29, W.&N.W. Sur.
Drlg. 815 ft.

L. C. Harrison et al's No. 2 Texas Land & Mortgage Co., 2,310 ft. from E line and 330 ft. from the S line of Sec. 4, Blk. 30, Twp. 1s, T.&P. Sur.
Derrick.

Illinois Oil Co.'s No. 1 Logan, 990 ft. from N line, 2,310 ft. from E line, Sec. 2, Blk. 30, Twp. 1s, T.&P. Sur.
Drlg. 2,730 ft.; acidized.

Iron Mountain Oil Co.'s No. 1 Read, 330 ft. from E line, 330 ft. from S line, Sec. 46, Blk. 30, Twp. 1n, T.&P. Sur.
Drlg. 830 ft.

Mixon et al's No. 1 Capps & Lucas, 2,310 ft. from S and 330 ft. from W, Sec. 17, Blk. 33, Twp. 1n, T.&P. Sur.
Ran surface pipe 432 ft.

Phillips Pet. Co.'s No. 1 Davis, 990 ft. from E and 2,310 ft. from S line, Blk. 30, Twp. 1s, T.&P. Sur.
T.D. 2,816 ft.; to shoot.

Slogel's No. 1 Foster, 990 ft. from S and 330 ft. from W, Sec. 43, Blk. 29.
Spudded.

IRION COUNTY

Melrose Oil Co.'s No. 1 J. D. Sugg, 1,700 ft. from the E line and 308 ft. from the S line of Sec. 35, Blk. 2, H.&T.C. Sur.
S.D. 270 ft.

JONES COUNTY

Capital Oil Co.'s No. 1 Young, 150 ft. S and 220 ft. E of W 33 acres of 84-acre tract.
R. Smith Sur.
Ran csg. 1,750 ft.

Clifton & Brazelton et al's No. 1 Cassey, 200 ft. from N and W lines of SE cor. of Sec. 15, Blk. 15, T.&P. Sur.
S.D. 850 ft.

Choate et al's No. 1 Faver, 170 ft. from S and E of Subdiv., A. Thompson Sur. No. 20.
Drlg. 910 ft.

Condor Pet. Co.'s No. 3 Sayles, 650 ft. from S and 330 ft. from W, Sec. 1, Blk. 20, T.&P. Sur.
Drlg. 406 ft.

John Byram et al's No. 1 P. Jones, 200 ft. from S and 660 ft. from W of NW, Sec. 5, Blk. 15, T.&P. Sur.
T.P. and T.D. 1,930 ft.; bldg. storage.

Richards et al's No. 1 Ransom, 200 ft. from N and E, Sec. 244, B. M. Clopton Sur.
Spudded and S.D.

Southern Oil Co.'s No. 2 Cade, 330 ft. S and 990 ft. E in Sec. 17, Blk. 19, T.P. Sur.
Underreaming at 1,045 ft.

Texas Inland Oil Co.'s No. 1 Boaz, 330 ft. from N and W of N 311 acres of S 611 acres, John Wall Sur. No. 272.
Drlg. 2,246 ft.

Texas Inland Oil Co.'s No. 2 Sellers, 640 ft. from N and 200 ft. from W, Wm. Delk Sur. No. 241.
Drlg. 722 ft.

LOVING COUNTY

D. C. Evans' No. 1 W. D. Johnson, 2,310 ft. from N and 1,650 ft. from W, Sec. 13, Blk. 57, Twp. 1, T.&P. Sur.
S.D. 2,030 ft.

PECOS COUNTY

Adams et al's No. 1 Schearer.
Location.

Adams et al's No. 1 Masterson.
Location.

California Oil Co.'s No. 24 Yates, 160 ft. from E line and 20 ft. from S line, Sec. 34, Blk. 194, G.C.&S.F. Sur.
S.D. 1,020 ft.

Cardinal Oil Co.'s No. 17-E Tippett, 150 ft. from E line of W half and 730 ft. from N of No. 5-E, Sec. 40, Blk. 194, G.C.&S.F. Sur.
S.D. 484 ft.

Gulf Prod. Co.'s No. 2 White and Baker, 330 ft. from N and E of Sec. 42, Blk. 194, G.C.&S.F. Sur.
T.D. 478 ft.; straightreaming.

Illinois Oil Co.'s No. 2 University, 330 ft. from E line and 960 ft. from S line, Sec. 31, Blk. 24, University Land Sur.
S.D. 1,500 ft.

C. S. Messenger's No. 2 Rand Jones, 1,935 ft. from S line and 1,013 ft. from W line of Sec. 5, Blk. 9, H.&G.N. Sur.
S.D. 1,930 ft.

Trans-Tex. Oil Co.'s No. 1 Caldwell, 330 ft. from E line and 330 ft. from S line of Sec. 27, Blk. 40, Twp. 9, T.&P. Sur.
S.D. 1,168 ft.

REAGAN COUNTY

E. P. Kirschner and White's No. 1 W. A White and McIntosh, 720 ft. from E and 800 ft. from N of Sec. 1,223, E.L.R.R. Sur.
S.D. 3,165 ft.

Skelly Oil Co. et al's No. 1-D E. S. Grayson, 1,980 ft. from N line and 660 ft. from W line of Sec. 33, Blk. 3, University Land Sur.
Drlg. 2,937 ft.

REEVES COUNTY

J. E. Cunningham's No. 1 Altman, 2,310 ft. from N line and 1,980 ft. from E line of Sec. 1, C. C. Wyatt Sur.
S.D. 1,000 ft.

Hugo Freels' No. 1 B. Greenman, 330 ft. from NE line and 231 ft. from SE line of Sec. 21, Blk. 2, H.&G.N. Sur.
T.D. 3,985 ft.

RUNNELS COUNTY

Agnew and Currie's No. 1 H. E. Wade, 2,640 ft. from N line and 320 ft. from E line of Sec. 24, Domingo Diaz Sur. No. 532.
Drlg. 2,195 ft.

Hall Oil Co.'s No. 1 Brevard, 160 ft. N and W in Subdiv. 21, D. Diaz Sur.
S.D. 1,335 ft.

Melrose Oil Co.'s No. 1 L. P. Woods, 150 ft. from NE lines and 3,475 ft. from W line of survey, Willett Holmes Sur. No. 106.
S.D. 1,429 ft.; to run csg.

R. Wells' No. 1 James, 396 from N and 820 ft. from E of James tract in Sec. 16, D. Diaz Sur.
S.D. 180 ft.

SCHLEICHER COUNTY

John M. Cooper et al's No. 1 Bert Page, 1,290 ft. from N line, 1,470 ft. from W line of Sec. 40, Blk. L, G.H.&S.A. Sur.
Drlg. 5,727 ft.; ran acid to soften formation.

Humble Oil & Ref. Co.'s No. 1 Ike Honig, 2,640 ft. from N line and 2,650 ft. from E line of Sec. 38, Blk. M, G.H.&S.A. Sur.
Drlg. 4,367 ft.

STERLING COUNTY

John I. Moore's No. 1 McIntire, 660 ft. from S and E. Sec. 35, Blk. 23, H.&T.C. Sur.
Drlg. 735 ft.

STONEWALL COUNTY

Merry Bros. and Perrini et al's No. 1 Williams, C SW of SW, Sec. 6, Blk. C, A.B. &M. Sur.
Fishing 2,045 ft.

SUTTON COUNTY

Texas & Hesselman's No. 1 Mower, 1,980 ft. from S and W of Sec. 39, Blk. 5, T.W.& N.G. Sur.
Location.

TAYLOR COUNTY

Dunnigan Bros. et al's No. 2 Hunter, 850 ft. from S and 250 ft. from W of Subdiv. No. 14, Willis Sur.
Drlg. 1,586 ft.

TERRELL COUNTY

W. A. Sudderth's No. 1 Phelps, 2,157 ft. from N line and 2,482 ft. from the W line of Sec. 5, Blk. 4-A, G. W. Turley Sur.
S.D. 5,635 ft.

UPTON COUNTY

Gulf Prod. Co.'s No. 103 McElroy, 1,980 ft. from S and 660 ft. from W, Sec. 197, Blk. F, C.C.S.D.&R.G.N.G. Sur.
Drlg. 10,850 ft.; good show high gravity oil at 10,795-10,840 ft.

Perry & Breeding's No. 1 Lane, 1,650 ft. from S line and 990 ft. from E line of Sec. 36, Blk. 1, M.K.&T. Sur.
S.D. 2,202 ft.

Stanolind Oil & Gas Co.'s No. 33 Burleson, 1,650 ft. from N line, 1,650 ft. from E line, Sec. 2, Nidever Sur.
Drlg. plug 1,959 ft.

Theabtal Oil Co.'s No. 2 J. F. Lane, 1,650 ft. from N and 990 ft. from E of Sec. 36, Blk. 1, M.K.&T. Sur.
Drlg. plug 2,265 ft.

Williams & Williams Drlg. Co.'s No. 1 Robbins, 1,600 ft. from S and 1,900 ft. from E, Sec. 4, G.C.&S.F. Sur.
Drlg. 2,105 ft.

WARD COUNTY

Alexander's No. 1 Richter, 1,650 ft. from NW, 1,170 ft. from NE line of Sec. 27, Blk. 34, H.&T.C. Sur.
S.D. 1,700 ft.

Bradford et al's No. 1 E. R. Allen, 660 ft. from NW line and 651 ft. from NE line, Sec. 11, H.&T.C. Sur.
Drlg. 392 ft.

Cook Drlg. Co.'s No. 1 Wood, 330 ft. from NW and SW, Sec. 5, W. F. Stewart Sur.
Drlg. 1,555 ft.

Plains Prod. Co.'s No. 1 J. J. McGregor, 660 ft. from SE line, 660 ft. from SW line, Sec. 169, Blk. 34, H.&T.C. Sur.
Drlg. 1,257 ft.

Postellio & Caprito's No. 1 Purcell, 330 ft. from NE and 990 ft. from NW, Sec. 17, Blk. 34, H.&T.C. Sur.
Rig up and S.D.

Sageland Oil Corp.'s No. 2 Pure-Bennett, 1,650 ft. from NW and 2,310 ft. from SW Sec. 16, Blk. 34, H.&T.C. Sur.
Spudded and S.D.

WINKLER COUNTY

Harry Adams' No. 2 Scarborough, 990 ft. from N line and 990 ft. from W line, Sec 2, Blk. 77, P.S.L. Sur.
Location.

Jeffries et al's No. 1 Brown & Altman, 2,310 ft. from S and W, Sec. 6, Blk. B-5. Location.

J. C. Maxwell's No. 1 Clapp, 1,980 ft. from N and 330 ft. from W, Sec. 37, Blk. 26, P.S.L. Sur.
Machine.

R. S. Mathews et al's No. 1 Evans, 1,320 ft. from N line and 1,320 ft. from W line, Sec. 46, Blk. 78, P.S.L. Sur.
S.D. 110 ft.

Sid Richardson's No. 1 Hill, 1,980 ft. from E line, 660 ft. from S line, Sec. 13, Blk. B-11, P.S.L. Sur.
Drlg. 2,977 ft.

Sid Richardson's No. 2-B Tidal-Scarborough, 1,005 ft. from S line, 990 ft. from W line, Sec. 4, Blk. C-22, P.S.L. Sur.
Testing at 3,055 ft.

Sid Richardson's No. 5-A Scarborough, 330 ft. from W and 190 ft. from S, Sec. 1, Blk. 22-C, P.S.L. Sur.
Machine.

Sayre Oil Co.'s No. 1 Howe, Sec. 13, Blk. 26, P.S.L. Sur.
Shows of oil at 2,709 ft. and 3,775 ft.; drlg. 2,806 ft.

Skelly Oil Co.'s No. 1 Halley, Sec. 25, Blk. B-11, P.S.L. Sur.
T.D. 3,112 ft.; T.P. 3,105 ft.; fishing 3,112 ft.

Texas Panhandle Wildcats

Week Ending October 8

CARSON COUNTY

McGill's No. 1 Cooper, 330 ft. from S and W of N½ NE Sec. 4, Blk. 9, I.&G.N. Sur.
Location.

Texas Interstate P. L. Co.'s No. 1 Burnett, C N½ Sec. 79, Blk. 5, I.&G.N. Sur.
Drlg. 2,122 ft.

CHILDRESS COUNTY

Humble Oil & Ref. Co.'s No. 1 B. P. Smith, 1,327 ft. from S line and 1,327 ft. from E line of Sec. 27, H.&G.N. Sur., Blk. 9.
Drlg. 4,925 ft.

DALLAM COUNTY

Eben Warner's No. 1 Jarbis, 1,520 ft. from S line, 415 ft. from W line, Sec. 2, B.&B. Sur.
S.D. 3,200 ft.; may abandon.

GRAY COUNTY

Dixon Creek Oil Co.'s No. 1 Benedict, 330 ft. from S and 330 ft. from W, Sec. 114, Blk. 3, I.&G.N. Sur.
T.D. 3,270 ft.; put on pump.

Southwest Prod. Co.'s No. 1 T. Cobb, 1,320 ft. from S line, 990 ft. from E line, NE Sec. 134, Blk. 3, I.&G.N. Sur.
T.D. 2,370 ft.; to deepen.

Texas Co.'s No. 1-C Taylor, 1,325 ft. from N and 1,320 ft. from W, Sec. 53, Blk. B-3, H.&G.N. Sur.
Rig.

Texwell Oil Co.'s No. 1 J. C. McConnell, 330 ft. from S line, 330 ft. from W line, SW SW Sec. 174, Blk. 3, I.&G.N. Sur.
S.D. 3,267 ft. for pipe line connection.

HUTCHINSON COUNTY

Brownie Oil Co.'s No. 1 Ware, 330 ft. from N and 330 ft. from W, Sec. 124, Blk. 4, I.&G.N. Sur.
Set csg.; T.D. 1,132 ft.

Huey et al's No. 1 Christian, 230 ft. from S and 330 ft. from W, Sec. 33, Blk. Y, A.&E. Sur.
Drlg. 2,425 ft.

MOORE COUNTY

C. C. Christie's No. 1 Moore, Sec. 37, Blk. 45, H.&T.C. Sur.
Location.

Phillips Pet. Co.'s No. 2 J. C. Wilson, Sec. 157, Blk. T-3, T.&N.O. Sur.
Drlg. 6,551 ft.

Sunray Oil Co.'s No. 2-A Jones, 330 ft. S and W lines Sec. 164, Blk. 3-T, T.&N.O. Sur.
Drlg. 2,788 ft.

RANDALL COUNTY

English et al's No. 1 Oxnard.
Fishing 5,375 ft.

WHEELER COUNTY

Bell O. & G. Co.'s No. 1 Plummer, 330 ft. S and E of NW Sec. 45, Blk. 24, H.&G.N. Location.

Bowers & Carvers' No. 1 L. B. Sims, 330 ft. from N line, 330 ft. from E line of SW Sec. 60, Blk. 17, H.&G.N. Sur.
S.D. 2,166 ft.

Carver Drilling Co.'s No. 1 Rock Island, 1,600 ft. from S line, 2,310 ft. from W line, Sec. 47, Blk. 13, H.&T.C. Sur.
Cellar.

Christie-Hickman's No. 1 Walker, 330 ft. S and E of NE Sec. 49, Blk. 24, H.&G.N. Sur. Material.

Dyke Oil Co.'s No. 1 G. W. Sitter, 330 ft. from N line, 330 ft. from E line, N½ NW Sec. 28, Blk. 24, E.&G.N. Sur.
S.D. 1,230 ft.

Ben G. Barnett's No. 1 Boren, NW cor. NE Sec. 24, Blk. 13, H.&G.N. Sur., 11 miles E and S of Shamrock.
S.D. 1,310 ft.

LeFors Pet. Corp.'s No. 1 Perkins, 330 ft. from S line, 330 ft. from W line, Sec. 54, Blk. 24, H.&G.N. Sur.
Rig up.

Piney O. & G. Co.'s No. 1 Rippey, C NE Sec. 128, Blk. 23, H.&G.N. Sur.
S.D. for orders 2,150 ft.
Reno Oil Co.'s No. 1 Mankins, SW SE SE Sec. 54, Blk. 13, H.&G.N. Sur.
T.D. 2,216 ft.; pumping 50 bbls. oil and 10 bbls. wtr. daily.
Smith Bros.' No. 1 Williams, 330 ft. N and E, W½ SE Sec. 49, Blk. 24, H.&G.N. Sur.
Rig.

East Central Texas Wildcats

(Continued from Page 50)

HUNT COUNTY

G. S. & S. Co.'s No. 1 O. Popper.
T.D. 2,052 ft.; tested; no show.
J. C. Hall's No. 1 Parrish, C of 100-ac. tract N. Delaney Sur., 5 miles N of Lone Oak Derrick.
L. G. Priest's No. 1 Amelia Barnett, 1,075 ft. from W line, 330 ft. from S line of J. C. Hamer Sur.
S.D. 1,355 ft.

KAUFMAN COUNTY

W. J. Lewis et al's No. 1 D. Clark, 430 ft from S line and 600 ft. from E line of Sur., 6½ miles NW of Elmo.
S.D. 475 ft.

LAMAR COUNTY

Cole et al's (formerly Optometrist Oil Club) No. 1 J. M. McFaddin, 450 ft. from S and W lines of E 25-ac. tract, 10 miles NW of Paris, Joseph Dick Sur.
S.D. 2,506 ft.

LEON COUNTY

Kellough and Tucker's No. 1 G. B. Young, 330 ft. from S line and 330 ft. from W line of 100-ac. tract, 4 miles SE of Long Lake, J. M. Boone Sur.
T.D. 5,548 ft.; tearing down rig.
Normangee Corp.'s No. 1 B. H. Henry, 1,850 ft. from E line and 2,700 ft. from N line of survey, Robert Rogers League, 2¼ miles NE of Normangee.
Spudded and S.D.

LIMESTONE COUNTY

Doughtry et al's No. 1 S. Welch, 150 ft. from NW and 900 ft. from NE of 77.64-acre tract in A. Varilia Sur., 4 miles W of Groesbeck.
Location.
Peyton Bros. No. 1 Steubenrach, 270 ft. NW from SE line, 1,170 ft. SW of NE line of 346.39-ac. tract, P. Varela Sur.
T.D. 5,706 ft.; P.B. to 5,640 ft.; swabbing csg.; showing little gas.
Schultz' No. 1 Roy Ward, NE cor. of 73.3-ac. tract, 5 miles W of Mexia Field, Harrison York Sur.
Derrick.
V. V. Waite's No. 1 Barrow, 650 ft. from S and 950 ft. from E line of 320-ac. tract, W. G. McKenzie Sur., 3½ miles NW of Thornton.
Location.

MORRIS COUNTY

McGinnis et al's No. 1 Staggers, 800 ft. from S line of survey and 150 ft. from W line of lease, J. B. Nelson Sur.
Reaming 3,927 ft.

NACOGDOCHES COUNTY

Murray Oil Co.'s No. 1 C. B. Watkins, 150 ft. from N line and 330 ft. from NW lines of 160-ac. tract, 3 miles S of Caro, H. Y. Bailey Sur.
S.D. 3,456 ft.
J. W. Rich et al's No. 1-A R. W. Hazlewood, 5,450 ft. from S line and 2,800 ft. from W line of survey, 50 ft. N of No. 1, 15 miles SW of Nacogdoches, Ewing Sur.
S.D. 701 ft.

NAVARRO COUNTY

Bennett Brothers' No. 1 T. E. Stewart, 150 ft. from NE line of lease, 10 miles SW of Corsicana, Wm. R. Bowen Sur.
S.D. 1,186 ft. to test.
R. B. Codding et al's No. 1 Lela Kelt, 450 ft. from S line and center of N and S lines of lease, 3 miles NE of Chatfield, C. B. Emmons Sur.
S.D. 1,546 ft.
W. J. Keeling et al's No. 1 J. F. Rushing, 484 ft. from N line and 150 ft. from W line of 184-ac. tract, 6 miles SW of Richardson, Henry Ford Sur.
Coring 2,910 ft.
McCullough et al's No. 1 C. Berry, 330 ft. from SE cor. of 35-acre tract, 1 mile W of Dawson, William Moss Sur.
S.D. 625 ft.
Syam Oil Co.'s No. 1 Mrs. Ray, 965 ft. E along N line from NW cor. Stevenson 101-acre tract and 595 ft. N at right angles, 3 miles SW of Rural Shade.
Location.
Wheelock and Collins' No. 1 I. N. Cerf, 375 ft. from N line of lease and 1,050 ft. from W line of lease, James Smith Sur. No. 726.
Top sand 6,002 ft.; slight show from 6,007-T.S. 6,003 ft.; T.D. 6,246 ft.; to test again.

RAINS COUNTY

Wadley et al's No. 1 P. F. Jones, 400 ft. out of SW cor. of 22-ac. tract, 2½ miles S of Alba, B.B.B.&C. Sur.
T.D. 4,720 ft.
Rio Oil Co.'s No. 1 Johnson, 330 ft. N and W of 39 ac. tract, R. Hitchkiss Sur., 4½ miles E of Emory.
T.D. 3,924 ft.; P.B. to 3,724 ft.; to sidetrack.

RED RIVER COUNTY

Cornell and Spear's No. 1 E. H. Thompson, 664 ft. from S and 1,062 ft. from W of NE cor. of 384-ac. tract, E. Smith Sur.
S.D. 1,072 ft.

RUSK COUNTY

Headwater Oil Co.'s No. 1 F. L. Gary, 375 ft. N of S line and center of E and W lines of 200-ac. tract, 8 miles E and S of Henderson, Jose A. Mora Sur.
S.D. 3,197 ft.
George Hudson et al's No. 3 Jeff Phillips, 150 ft. from N line of survey and 700 ft. from W line of 100-ac. tract, 4 miles SE of Minden, N. Villaria Sur.
S.D. 3,675 ft.
Ben Lamb's No. 1 H. Leath, 330 ft. out of NW cor. of 185-acre tract in L. J. Dooley Sur., 2½ miles E of Pirtle.
Spudded.

SMITH COUNTY

Deck et al's No. 1 Dendall, 330 ft. from S and W of 55-ac. tract, J. Williams Sur., 3 miles E of Van Field.
Spudded and S.D.
Fair et al's No. 1 Rushing, 1,000 ft. SE of old hole, 1¼ miles SE of Whitehouse.
S.D. 4,298 ft.
Paul S. Williams et al's No. 1 Dean, 330 ft. E and 730 ft. N of 100-acre tract in Denson Moore Sur., 1 miles NE of Bullard.
Derrick.

UPSHUR COUNTY

Virgil Hodges et al's No. 1 J. M. Floyd, 330 ft. from NE cor. of 126-ac. tract, 4 miles N of Gladewater, Railroad Sur.
S.D. 3,764 ft.
Lanier and Moore's No. 1 Vaughan, 230 ft. from S line and 330 ft. from W line of 100-ac. tract, 2 miles NW of Big Sandy, P. W. Standifer Sur.
S.D. 1,042 ft.
Joe Papadakis' No. 1 Reynolds, 330 ft. out of NE cor. of 103-acre tract, J. Davenport Sur., 5 miles NW of Gladewater.
Location.

VAN ZANDT COUNTY

Pete Corley et al's No. 1 Slaton, 160 ft. from W and 660 ft. from N lines of William Carlton Sur., 3 miles SE of Ben Wheeler.
Rig.
W. E. Brown's No. 1 Bank of Edgewood, 560 varas from SW cor. of H. M. Lead Sur., M. B. Lout Sur.
Drlg. 4,126 ft.
Van Zandt Synd.'s No. 1 C. S. Coker, 150 ft. out of SW cor. 55-ac. tract, William Daniel Sur.
T.D. 1,208 ft.; pumping 1½ bbls. in 24 hrs.
Gillum and Allen et al's No. 1 A. T. Bass, 150 ft. from W line and 150 ft. from N line of 10-ac. tract. William Hart Sur.
Fishing 4,267 ft.
Green and Winn's No. 1 Eaton, 330 ft. out of most westerly SW cor. of J. Wilson Sur., 2 miles SE of Martin.
Location.
Hodges & Schwartz's No. 1 McKinsey, C of N and S lines and 150 ft. from W of 106-ac. tract, Wm. Daniels Sur.
Coring 865 ft.
Martin & Evans' No. 1 Bryant, 483 ft. N of same operators' dry hole, Nacogdoches County School Land Sur.
Derrick.
Miller et al's No. 1 J. M. Palmer, 150 ft. from S and E lines of 69-ac. tract, Nacogdoches County School Land Sur.
S.D. 610 ft.
Peden and Olson's No. 1 J. M. Palmer, 200 S of No. 2 and 140 ft. from W line of tract, J. Goodman Sur.
S.D. 1,288 ft.
M. Rouch et al's No. 1 Bearden & Palmer, 150 ft. out of SE cor. of 61-ac. tract, Nacogdoches C.S.L.
T.D. 1,125 ft.; cored 5 ft. shale and saturated sand.

WOOD COUNTY

Alex Snyder et al's No. 1 T. Holmes, 200 ft. out of NE cor. of 122-ac. tract, 1½ miles SE of Hawkins, A. N. McKnight Sur. 399.
S.D. 4,916 ft.

Southwest Texas Wildcats

(Continued from Page 45)

DUVAL COUNTY

Grimes et al's No. 1 Fitsimmons, 330 ft. from S and E lines of Sur. 291.
Spudded and S.D. for wtr.
G. Stewart Smith-Jefferson Oil Co.'s No. 1 Garcia, 990 ft. south of N line, 330 ft. W of E line, Blk. 3, Jose Marcelo Hinojosa grant.
No report.
O'Byrne & Jennings' No. 1 Benavides, 3,734 ft. from S cor. and 330 ft. from W line at right angles, Sur. 355.
Drlg. 2,314 ft.
Tom Graham and Texon Royalty Co.'s No. 2 Parr, 2,050 ft. from N line, 2,550 ft. from E line, Sur. 185.
Coring 3,449 ft.
Mills Bennett Prod. Co.'s No. 1 D.C.R.C., 150 ft. N, 4,200 ft. E line of Sur. 192.
Derrick.
Texas Co.'s No. 1 G. W. Sutherland, making location in Sur. 503.
Location.
Texas Co.'s No. 1 Tom Graham, 5,065 ft. N 45 deg. E and 1,130 ft. S 35 deg. E, W cor. Geo. Reynolds Sur. 572.
Drlg. 5,142 ft.

EDWARDS COUNTY

Carter et al's No. 1 W. A. Miers, 990 ft. from N and E lines of Sec. 6, C.C.S.D.& R.G.N.G. Sur.
T.D. 402 ft.; S.D.
Will Olhausen's No. 1-B Turney, 660 ft. from W line, 1,632 ft. from N line of Sec. 176 C.C.S.D.&R.G.N.G. Sur.
T.D. 409 ft.; drlg. deeper after testing small amount of gas and oil.
H. H. Sides' No. 1 Turney, C.C.S.D.&R.G.N.G. Sur. No. 164, 1,320 ft. N line and W line of survey.
S.D. 1,012 ft.
Harry Adams' No. 1 Holman, 1,650 ft. N line, 330 ft. from E line, Sec. 22, C.C.S.D. R.G.&N.G. Sur.
Drlg. 425 ft.

FAYETTE COUNTY

Magnolia Pet. Co.'s No. 1 Steinman Almansure Sur., 330 ft. N line and E line of most southerly cor. of 90-ac. tract.
Drlg. 3,551 ft.
J. Elmer Thomas and Henshaw Bros.' No. 1 Gleckler, 330 ft. SW and SE of N cor. of 98.5-ac. tract in Anna Powell League.
Spudded in.

FRIO COUNTY

Amerada Pet. Co.'s No. 2 Halff & Oppenheimer, begin at most easterly N cor. of John H. Gibson Sur. No. 16, thence SE along NE line of Sur. 2,100 ft., thence SW at right angles 300 ft. (4 mi. SW of Pearsall).
Drlg. lime 8,992 ft.

GILLESPIE COUNTY

Ed L. Nixon's No. 3 Lindig, 12,694 ft. S line, 1,333 ft. W line, Maria Josepha Guerra Sur. No. 41, or 6 ft. S of No. 1.
S.D. 465 ft.

GOLIAD COUNTY

Oceanic Pet. Co.'s No. 1 Fromme, 1,500 ft S line, 1,200 ft. W line of 62-ac. tract in P. D. Dexter Sur., 10 miles N of Goliad.
T.D. 2,685 ft.; to set csg.
Jack Porter's No. 1 Mrs. N. Meyers, NW cor. of 404.54-ac. tract, 1¾ miles SW of Huisache.
Spudded.

GONZALES COUNTY

Weinert et al's No. 1 A. Kellies, 3,340 ft. S line and same N of river and 150 ft. E line of tract, Ira Nash Sur.
Drlg. shale 3,376 ft.

HIDALGO COUNTY

Davis & Harrison's No. 1 Lula George, 300 ft. from S and 700 ft. from E lines of Tract 13, Porcion 41, Ancient Jurisdiction of Reynosa.
T.D. 4,135 ft.; sand 4,109-35 ft.; prepare to deepen.
Rogers et al's No. 1 Fairbanks, 7 miles S of McAllen.
T.D. 210 ft.; S.D.
Union Sulphur Co.'s No. 2 American Rio Grande L. & I. Co., 400 ft. from S and E lines of tract, Blk. 36, North Capisallo district.
Drlg. shale 6,353 ft.

JIM HOGG COUNTY

John D. Norwood's No. 1 C. W. Hellen, 330 ft. N and W lines, Sur. 48.
Drlg. 1,106 ft.

JIM WELLS COUNTY

Plymouth Oil Co.'s No. 1 Cuero Cattle Co., 330 ft. from S and W lines of H.T.&B Sur. No. 7, 2¼ miles W from Alfred.
Rig standing.
Smith & Storey's No. 1 Martha E. Ellworth, 330 ft. N and W from SE cor. of W half of W 426 acres of Stanley Welch Sur.
T.D. 2,610 ft.; gas sand 2,328-50 ft.

KARNES COUNTY

California Oil Co.'s No. 1 J. C. Tom, Jr., 466 ft. each way from NW cor. of 6,525-ac. tract, Maria-De Jesus Y. Barbo grant.
Rigging up.
R. E. Cezeaux et al's No. 1 Tom Campbell, 430 ft. S and E cor. of farm and survey J. R. Backer Sur., 12½ miles SW of Falls City.
T.D. 1,254 ft.

KENDALL COUNTY

Walter Bradley's No. 1 Werner, John F. Torrey Sur.
T.D. 862 ft.; set 8¼-in. csg. at 580 ft.; top Trinity 576 ft.; standing.
W. R. Shanklin's No. 1 Seidenstick, 1,835 ft. from most easterly E line, 100 ft. from most northerly S line of Antonio Rodegues Chacon Sur. 257.
T.D. 400 ft.; S.D. for csg.

KERR COUNTY

Edmiston Oil Corp.'s No. 1 Whitworth, 1,160 ft. from S line and 1,333 ft. from E line of Sec. 1,439 of the H.E.&W.T. Sur.
T.D. 675 ft.; S.D.
Herbert Oil Co.'s No. 1 J. D. Witt, 13,200 ft. from N line, 1,200 ft. from W line of Sec. 1,923, Hamilton Sur.
Set 15½-in. csg. 110 ft., 12½-in. csg. 962 ft.; T.D. 1,896 ft.; S.D.
Jeff Love and Eastland Oil Co.'s No. 5-E Jeff Love, 1,500 ft. SE of No. 1 and 1,650 ft. from SE cor. and 300 ft. from N line of Sec. 1,591.
T.D. 3,065 ft.; showed gas at 3,000-45 ft.
J. F. Morrissey et al's No. 1 F. A. Karg, 1,400 ft. from S line and 400 ft. from E line of survey, Sec. 1, B.S.&F. Sur.
T.D. 1,122 ft.
G. F. Schreiner's No. 3 Jeff Love, 1,444 ft. from W line, 1,194 ft. from S line of Sur., 660 ft. N and 100 ft. E of Evans & Gants' No. 1 Love, Martinez Sur. 1,594.
Location.

KLEBERG COUNTY

J. S. Brown's No. 1 Antone Dietz, Sec. 7, Hotch estate.
S.D. 3,138 ft.
H. Clark et al's No. 1 Kivlin, Sec. 39.
S.D. 2,350 ft.
Ryalls & Bartlett's No. 1 Flats, Sec. 46.
S.D. 985 ft.

LaSALLE COUNTY

Dupree Fountain's No. 1 R. J. Kroschewsky, 1,000 ft. from N line, 150 ft. from E line, in A. G. Starty Sur.
Rig up and S.D.
Standard Oil Co. of D. C.'s No. 1 J. M. Martin, 300 ft. S and W lines of 643-ac. farm in Sur. 683.
T.D. 1,550 ft.; standing.

LEE COUNTY

Jas. E. Pederson's No. 1 Turner, David Hudson Sur.
T.D. 6,330 ft.; Georgetown lime; running 6⅝-in. csg.

LIVE OAK COUNTY

J. H. Durbin's No. 3 Marbach, 1,850 ft. from W line and 450 ft. from S line of 428-ac. tract in Stephen Hays Sur.
Abnd. location.
W. H. Heimerich's No. 1 Cartwright, 660 ft. from W line, 330 ft. from S line of Lot 16, Seale, Morris & Seale Sur.
Location.
Henderson Coquat's No. 1 Jacob, 660 ft. from N and E lines of Tract 27, Charles B. Trapp Subd., of Everett & Henry Sur.
T.D. 1,836 ft.; D.S.T.; 5 fourbies fluid, mostly salt wtr; slight show oil and gas; drlg. deeper.
Henderson Coquat et al's No. 1 Robertson, Sec. 314.
Drlg. 2,204 ft.
Henderson Coquat et al's No. 1 Little, 1,320 ft. NE of S cor. of M. M. Shipp Sur. and 330 ft. N of S line.
Spudded.
O'Neil & Coquat's No. 4 Sanger.
T.D. 1,350 ft.; drlg.
Unit Oil Co.'s No. 2 Terrell, 1 mile NE of No. 1.
Abnd. 1,505 ft.

McMULLEN COUNTY

Armoil Prod. Co.'s No. 2 K. Martin, Sur. 489.
Location.
Beer-Witherspoon's No. 1 Ezzell, 330 ft. from N and W lines of 40-ac. tract in Fant & Fadden Sur.
Location.
Boling's No. 1 Brown, 1,500-ac., NW Crowther field.
Location, Contract calls for 1,000 ft. test.
Brasada Oil Co.'s No. 1 Nueces Land & Livestock Prop., in C SE Sec. 111 and about 4 miles W of the Cooper & Frates No. 1 Hagist.
Abnd. 2,010 ft.
Choate & Noble's No. 1 Miles, 330 ft. from S line, 2,750 ft. from E line of 1,250-ac. tract in Stephens Sur.
Location.
Encino Oil Co.'s No. 1 Walker, 1,200 ft. from N and W lines of 2,569-ac. tract, Sur. 128.
Drlg.
W. W. Kelley's No. 1 Tom Walker, cor. of Surveys 106, 182, 23 and 104.
Rigging up.
C. C. Shumway's No. 8 Shiner.
C. C. Shumway's No. 8 Hagist.
Rig up.
Charles Wuest's No. 1 Fisher, Roderick O'Boyle Sur.
Moving in.
Hy Yound's No. 1 Callihan, James Gardner Sur., NW cor. Blk. 4, Sec. 6.
Derrick.

MILAM COUNTY

McNeill Pet. Co.'s No. 1 W. C. Butler, 450 ft. NW line, 1,050 ft. NE line, Butler 100-ac. tract, James Lewis Sur.
Abnd. 2,400 ft.

MEDINA COUNTY

C. M. Peacock's No. 1 Odem, 160 ft. from W line, 200 ft. from S line of Castro Sur. No. 173-174.
Location.
Scoggins & Sanders' No. 1 L. W. Burrell, 150 ft. from E line, 1,750 ft. from N line of M. E Gage Sur. 395.
No report.

NUECES COUNTY

Buff Pet. Co.'s No. 1 Vincent Bluntzer, 660 ft. N line, 660 ft. E line of Share 7 of Bluntzer Subd.
Rigging.
Clymore Oil Co.'s No. 1 Palo Alto Farms, 2,640 ft. from N and E lines of Sec. 123 of Bishop Subd.
Derrick.
Stanolind O. & G. Co.'s No. 3 Stratton, 1,980 ft. from N line, 660 ft. from W line of NE Sec. 13, DeAbajo grant.
No report.
Texon Royalty Co.'s No. 1 Robert Driscoll, 330 ft. from N line, 5,697 ft. from W line of 880-ac. Driscoll tract and E of Simmons & Perry tract.
Rig up.
Texon Royalty Co.'s No. 1 W. W. Walton, 330 ft. from N and W lines of 166 2/3-ac. tract in Lot No. 5.
No report.

REAL COUNTY

M. J. Heartwell et al's No. 2 L. J. Haby, 494 ft. from W line and 2,163 ft. from S line of A.B.&M. Sur. No. 175.
T.D. 2,837 ft.; S.D.

SAN PATRICIO COUNTY

Allied Minerals' No. 1-A Ramsey, 466 ft. E, 220 ft. N of SW cor. of the North B. Giddings Sur. on a 1,000-ac. tract.
T.D. 2,000 ft.; to clean hole at 1,110 ft.
Lonnie Glasscock's No. 1 M. F. Timmons, 330 ft. out of SE cor. of Blk. 27, San Patricio townsite.
Rigging up.
Gum Hollow Oil Co.'s No. 1 J. G. Willacy, 2 mi. W Portland.
Location.

STARR COUNTY

Cooper & Andrews' No. 1 J. M. Martinez, SW cor. Sec. 135.
Location.
C. R. Borah's No. 1 A. Guerra, San Jose grant, 330 ft. from N and 150 ft. from E line of Sec. 6 (NE part of county).
Drlg. 1,712 ft.
E. P. Evans' No. 1 Kelsey Bass, 330 ft. N of State Highway 4, Sec. 7, Subd. Porcions 75,76 and 77.
Drlg. 716 ft.
C. L. Smith et al's No. 1 J. M. Longfellow, 330 ft. out of NW cor. of Sur. No. 281.
Drlg. water well.
Heep Oil Co.'s No. 1 Guerra, 330 ft. from NE and SE lines of Blk. 35, J. N. Crawford Subd., Porcion 56, Jurisdiction of Mier.
Location.
R. M. Mitchell's No. 1 Kelsey Bass, 150 ft. from N line, 1,150 ft. from E line, Share 5, Por. 75.
Location.
R. M. Mitchell's No. 1 Seabury, 4,000 ft. from N line, 150 ft. from E line of Share 5, Por. 75, Camargo.
S.D. 210 ft.
Smith & Weston's No. 1 M. M. Garcia, Blk. 9, Sur. 903.
Location.

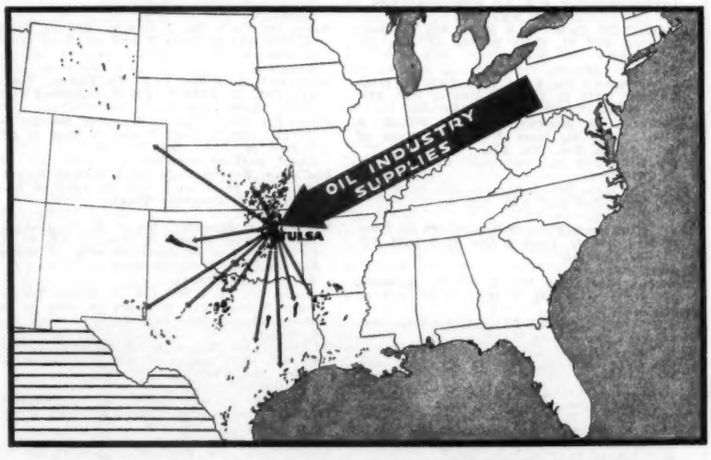
46 Oil Equipment Concerns Locate in Tulsa

Between March 1st and September 30th

Recognition of Tulsa as the world's primary center for purchases of oil equipment continued in emphatic measure during the past 7 months, when 46 additional manufacturers of oil industry supplies and equipment opened manufacturing plants or warehouses in Tulsa, moved in stocks, established sales offices, or secured resident sales representation here.

An unanswerable array of facts has led these companies to come to Tulsa. Outstanding among these are (1) that Tulsa has more major oil companies (45), and more oil companies of all sizes (600), than all other Southwestern centers combined; (2) that world oil production centers at Tulsa, —since the Mid-Continent, of which Tulsa is the hub, produces 63% of the nation's petroleum; (3) that Tulsa is the hub of the nation's pipe line and refining network; (4) that Tulsa is the major center of oil equipment buying, purchases here, in a normal year, totalling $400,000,000; (5) that Tulsa is the logical point from which to distribute to the world's most important group of oil fields.

This group of oil fields has been augmented recently in an important way. The Fitts Pool, in Pontotoc County, Oklahoma, opens a new oil area which promises tremendous development. The Polo Pool, west of Perry, Oklahoma, is another new field—small but rich. It is significant that Tulsa oil companies largely control these new developments—also that it was Tulsa capital which purchased at auction more than $1,000,000 worth of Osage leases, in September.



This map shows how Tulsa is the logical point from which to distribute to the oil and refining centers of the Mid-Continent and Gulf Coast

The 46 new firms who have established Tulsa connections are as follows:

1. A. M. Byers Co., of Pittsburgh, Pa., wrought iron products. District Sales Representative.
2. American Sand-Banum Co., of New York, water treating. Oklahoma Sales Agent.
3. American Steel & Wire Co., Chicago, Illinois. Sales Office.
4. American Oil Pump & Tank Co., Cincinnati, service station equipment. Southwestern Sales Representative.
5. Beaver Enameling Co., Elwood City, Pa., porcelain signs. Southwestern Sales Headquarters.
6. Baker Oil Tools, Inc., Los Angeles. Sales Representative.
7. Byron Jackson Co., of California. Sales Agent.
8. Bridgeport Machine Co., Wichita, Kans. Sales Representative.
9. Bridgeport Brass Co., Bridgeport, Conn., brass and copper products. District Sales Agent.
10. Brown Sheet Iron & Steel Co., St. Paul, Minn., tank trucks. Sales Agent.
11. Charles N. Hough Manufacturing Co., Franklin, Pa. District Warehouse.
12. Cudahy Packing Co., Gibson Dept., soaps. District Sales Representative.
13. Chicago Pneumatic Tool Co. District Sales Representative.
14. Crane Packing Co., Chicago, flexible metallic packings. District Sales Office.
15. Cooling Tower Co., Inc., New York. Sales Agent.
16. Carrier Engineering Co., Newark, N. J., air conditioning equipment. District Sales Agent.
17. Cook Paint & Varnish Co., Kansas City. Petroleum Division Headquarters Office.
18. Eagle-Picher Sales Co., insulation. District Sales Office.
19. Fenwick-Reddaway Manufacturing Co., Newark, N. J., belting. District Sales Agent.
20. France Packing Co., Philadelphia, Pa., metallic packing. District Sales Representative.
21. General Refractories Corp., Philadelphia, Pa., fire brick. District Sales Office.
22. Hughes Tool Co., Houston, Texas, rotary drilling bits. Sales Office.
23. Imperial Belting Co., Chicago. Sales Representative.
24. Ingersoll-Rand Co., New York, pneumatic hand tools. District Sales Agent.
25. Kieley & Mueller, Inc., New York, engineering specialists. Sales Agent.
26. Kerlow Steel Flooring Co., Jersey City, N. J. Oklahoma Sales Agent.
27. Kerotest Manufacturing Co., Pittsburgh, Pa., controls, valves and fittings. District Sales Office.
28. Larkin Packer Co., St. Louis. District Warehouse.
29. Lone Star Cement Co., Kansas. Sales Agent.
30. Lincoln Engineering Co., St. Louis, lubrication equipment. District Sales Agent.
31. Mexico Refractories Co., Mexico, Mo., fire brick. District Sales Office.
32. LaClede-Christy Clay Products Co., St. Louis, fire brick. Sales Representative and Stock.
33. McAlear Manufacturing Co., regulators and control apparatus. Sales Agent.
34. Mercon Regulator Co., Milwaukee, Wis., pressure, flow and level regulators. Sales Representative.
35. Pyrene Manufacturing Co., fire prevention equipment. Sales Office.
36. Plibrico Jointless Fire Brick Co., Chicago. Eastern Oklahoma Sales Representative.
37. Phelan-Faust Paint Manufacturing Co., of St. Louis. District Sales Office.
38. Phister Manufacturing Co., Cincinnati, fire equipment. Oklahoma Distributor.
39. Reed Roller Bit Co., Houston, rock bits and reamers. Sales Office.
40. Rotary Lift Co., Memphis, Tenn., air lifts. District Sales Agent.
41. Ralph N. Brodie Meter Co., Oakland, Calif., meters. Sales Agent.
42. Sludge Pumping, Inc., New York, sludge pumps. District Sales Agent.
43. Texacone Co., Dallas, Texas, packing. District Sales Agent.
44. Wyatt Metal and Boiler Works, Dallas, steel plate fabricators, tanks and pipe. District Sales Representative.
45. Western Iron & Foundry Co., Wichita, Kans. Sales Agent.
46. Warren F. Bleecker, manufacturer of Zero Hour Bombs. Moved Factory to Tulsa.

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The Tulsa Chamber of Commerce will be glad to answer questions and to prepare detailed reports for firms considering Tulsa as a branch office, warehouse, or manufacturing point. Your inquiry is cordially invited.

TULSA

Oil Capital of the World

Sun Oil Co.'s No. 1 Gonzales & Clark, 600 ft. out of NW cor. of NE Sec. 372, T.T. Ry. Sur. No. A-773.
Drlg. shale 908 ft.
United Prod. Co.'s No. 1 Guerra, 36, 170 ft. from NE line, 1,521 ft. from NW line of Porcion 55.
Derrick.
E. L. Younkin's No. 1 Kelsey Bass, 330 ft from S line, 7 ft. from W line of Blk. 19 in Porcion 87.
Cored sand showing oil 1,740-46 ft.

TRAVIS COUNTY

Humble O. & R. Co.'s No. 1-B Buck Christian, 990 ft. from SE line, 330 ft. from SW line of 127-ac. tract in Kemp Sur.
Drlg. 535 ft.
Marts & Beavens' No. 1 Emil Bloomquist, 150 ft. from NW line and SW line of 99½-ac. tract in Peter C. Harrison Sur.
S.D. 1,300 ft.

UVALDE COUNTY

Humble Oil & Ref. Co.'s No. 1 R. L. Anderson, 7,450 ft. SW of NE line and 9,100 ft. SE of NW line of J. J. Guerra Sur (3 mi. NE of Uvalde).
Drlg. 4,080 ft.
T. T. Word's No. 1-B Truelove, 45 ft. E of No. 1-A.
No report.

WEBB COUNTY

W. W. Lincoln's No. 1 M. B. Volpe, 3,300 ft. N, 150 ft. W line of Sur. 2,011.
Location.
W. P. Morris' No. 1 A. M. Bruni, 994 ft. NW line, 943 ft. NE line, Blk. 65, G. M. Brown Subd, Saltea pasture, in J. V. Borrego grant.
T.D. 1,385 ft.; shut down.
Fidelity Exploration Co.'s No. 1 Soldivar 1,300 ft. from E line, 2,600 ft. from N line of Sur. 657.
T.D. 2,350 ft.; S.D.

WILLACY COUNTY

W. W. Silk's No. 1 Stillman, Lot 16, Blk 30, Santa Rosa Subd., Share 44.
Drlg. 2,066 ft.

WILLIAMSON COUNTY

Mann & Ross et al's No. 1 F. Ross, John Bevil Sur. 56.
S.D. 710 ft.
T. J. McConnell's No. 1 J. R. Nazier, 150 ft. from S line and San Gabriel River and 150 ft. from E line of 124-ac. tract in Zarzo Sur.
T.D. 675 ft.; drlg.
J. A. Morgan Russell's No. 1 Nelson Est., 150 ft. S line and 1,115 ft. E line of J. L. Justin No. 2 Sur., 5 miles S of Georgetown.
No report.
Stalley & Caffy's No. 1 A. J. Nelson, 350 ft. from SE line and 150 ft. from NE line of Barney C. Love Sur.
Drlg. 211 ft.

WILSON COUNTY

Ray Oil Co.'s No. 1 J. M. McDaniel, 1,700 ft. from SW line, 350 ft. from NW line of 193.5-ac. tract in Concepcion Bostelio Sur. No. 9.
Rig up and S.D.
J. C. Yancey's No. 1 Lyssy, 300 ft. from SE and SW lines of lease in D. J. Holt Sur.
T.D. 1,600 ft.; shut down in shale.

ZAPATA COUNTY

C. C. Crews' No. 1 M. D. Slator, 2,111 ft. from SW line, 1,980 ft. from SE line of Blk. 1, Mission Oil Co. Subd. of Slator ranch, Borrego grant.
T.D. 1,720 ft.; std.
Danvers & Harrison's No. 1 M. J. Vela, 686 ft. NE line and 300 ft. NW line, or 3,140 ft. E line and 330 ft. N line of Por. 39, Blk. 7, Bela Subd.
T.D. 1,632 ft.; preparing to deepen.
J. W. Edwards' No. 1 D. A. McAskill, 150 ft. from N and E lines of Blk. 63, J. W. Edwards Subd. of 4,069.6-ac. tract out of Corralitas Subd. of the J. V. Borrego grant.
Drlg. 76 ft.
Merle Gunby's No. 3 Alice D. Haynes, 200 ft. SE and NE lines, Blk. 9, Haynes Subd., Comitas and Villa grant.
Moving in.
H. & M. Drlg. Co.'s No. 1 Slater, 614 ft. from SW line, 150 ft. from SE line, Blk. 65, J. B. Barrego grant.
Spudded and S.D.
H. V. & W. Oil Co.'s No. 1 Cuellar, 150 ft. NE line and 450 ft. SE line of Blk 3, Sur. 5, Pappas Subd., Por. 34.
T.D. 1,125 ft.; moving in heavier rig.
Howell Muckelroy's No. 1 Filemn Flores, 77 ft. from SE line on NE line Lot 2, Blk. 30, Por. 37.
Derrick.
Joe Palmer's No. 11 S. Vela, 320 ft. from NE and SE lines of Blk. 170, Share 4 of L. Grillo grant (3 mi. E of Redondo Pool)
S.D. 1,019 ft.
E. P. Wells' No. 1 S. E. Garcia, 150 ft. from N and E lines of 200-ac. tract in Pedernal grant.
Moving in rig.

Southwest Texas Proven

Week ending October 6

NORTH DALE POOL—BASTROP COUNTY

Cole Pet. Co.'s No. 1 Rubin Gage, NE cor. of tract, 150 ft. each way from corner.
Location.
Cole Pet. Co.'s No. 6-B American Natl. Bk., 150 ft. NE and SE lines of 700-ac. tract, Gage Sur., Blk. 31.
Rig.
Joe E. Mills' No. 1 Mrs. W. J. Cardwell, 900 ft. from SE line, 1,200 ft. from SW line of tract, J. A. Navarro Sur.
Rigging up.
Joe E. Mills et al's No. 1 Wm. Litton, 630 ft. from SE line, 850 ft. from SW line of 320-ac. tract in Navarro Sur.
T.D. 1,721 ft.; set csg.; W.O.C.

CAESAR—BEE COUNTY

R. A. David's No. 1 Baptist Church, center of 3-ac. church lot, F. Lewis Sur.
Derrick.
Falvey et al's No. 1 Gardner, 330 ft. out of NE cor. of Gardner tract.
T.D. 3,064 ft.; cmtd. csg.

NORTH PETTUS FIELD—BEE, GOLIAD AND KARNES COUNTIES

Houston Oil Co.'s No. 5-B Neuhaus, B.S.&F. Sur., 660 ft. S of No. 3-B.
Sand 2,634-51 ft.; making gas and est. 25 bbls. dly.
Nichols, Hindman et al's No. 1 Weldon & Lackey, 1,694 ft. NW line, 1,607 ft. SW line, 40-ac. tract, J. Gomes Sur. (Goliad County).
Drlg. 3,994 ft.
Magnolia Pet. Co.'s No. 5 Scarborough, 660 ft. S of No. 3 and 330 ft. from the W line of lease.
T.D. 3,648 ft.; comp. 90 bbls. dly.
Sun Oil Co.'s No. 3 Scarborough, 660 ft. S of No. 1, 330 ft. from E line of lease.
Drlg. 3,450 ft.
United Prod. Co.'s No. 46 Ray, 330 ft. E line of tract and equidistant offset Houston Oil Co.'s No. 3-B Neuhaus, W. J. Porter Sur.
T.D. 4,060 ft.; P.B. to 3,646 ft.; comp.; no gauge.
H. H. Weinert et al's No. 3 Grady Smith.
Location.

TULETA—BEE COUNTY

Dirks Bros.' No. 2 Skinner, 660 ft. S of No. 1 and 330 ft. from E line of Tract 10.
Elev. 324 ft.; top sand 3,930 ft.; T.D. 3,957 ft.; comp. 250 bbls. dly.
E. M. Jones' No. 3 Robinson, SE cor. of tract, Uranga grant.
Drlg. shale 4,203 ft.
E. M. Jones' No. 1 Skinner & Harris, 330 ft. from N and W lines of E 80-ac. of NW of Sec. 10 Ragsley Subd. of Uranga grant.
Location.
Mills Bennett's No. 1 Tuleta Mercantile Co., 330 ft. from N and W lines of SW Sec. 10.
Location.
Wrightsman Oil Co.'s No. 1 Unzicker, 330 ft. from S and E lines of quarter Sec. 6. Ragsley Subd., Uranga grant.
Location.

VON ORMY—BEXAR COUNTY

Texas Pet. Co.'s No. 3 Carruth, 1,024 ft. from W line, 410 ft. from S line of 667-ac. tract, F. Rolon Sur.
Abnd. 810 ft.
W. L. Umburn's No. 1 Bilhartz, in SW cor. of tract, offsetting Strumberg well, F Rolen Sur.
No report.

DRISCOLL—DUVAL COUNTY

Continental Oil Co.'s No. 3-A Clara Driscoll, 600 ft. N, 2,000 ft. E of SW cor. Sec. 23.
Drlg. shale 3,594 ft.

GOVERNMENT WELLS POOL—DUVAL COUNTY

Bridwell Oil Co.'s No. 8 Hahl, 825 ft. from E line, 330 ft. from S line of Blk. 28, Sur. 250.
Fishing 2,365 ft.
Al Buchanan's No. 4 D.C.R.C., 1,650 ft. from N line, 1,310 ft. from E line of Sur. 206.
T.D. 1,497 ft.; comp. 100 bbls. dly.
Edgington & Murray's No. 1 Winch & Henne, 330 ft. from N and E lines of Blk. 15 in Sur. No. 250.
Sand 2,262-69 ft.; set 7-in. at 2,262 ft.; T.D. 2,369 ft.
Felix Oil Co.'s No. 2 Norton, 330 ft. S and W lines of S half SW, Sur. 62.
Rigging up.
K. F. Hasselman's No. 3 Moody, 220 ft. from W line, 150 ft. from S line of S half SW of Sur. No. 60.
Rig up.
Highland Oil Co.'s No. 1 W. P. Runnels, 330 ft. from N and W lines of SE NW of Sur. 62.
T.D. 2,361 ft.; sand 2,349-61 ft.; 7-in. csg. at 2,349 ft.; testing.
Humble Oil & Ref. Co.'s No. 42 Paul White, 990 ft. from S line, 660 ft. from W line of Sur. 58.
Sand 2,267-76 ft.; T.D. 2,317 ft.; comp. 15 bbls. per hour, one-quarter inch choke.
Humble O. & R. Co.'s No. 43 Paul White, 2,970 ft. from S line, 330 ft. from W line of Sur. 58.
Drlg. shale 1,523 ft.
Humble O. & R. Co.'s No. 44 Paul White, 1,650 ft. from S line, 330 ft. from W line of Sur. 58.
Drlg. 1,416 ft.
Magnolia's No. 12 Duval County Ranch Co., 990 ft. from N and E lines, Sur. 59.
T.D. 2,228 ft.; sand 2,130-88 ft.; comp. 10 bbls. hr.
Magnolia Pet. Co.'s No. 13 D.C.R.C., 990 ft. S, 330 ft. N line of Sur. 59.
Location.
Magnolia Pet. Co.'s No. 7 Hahl-Sutherland, 330 ft. from N and E lines of NW of Sur. 61.
Location.
Magnolia Pet. Co.'s No. 2 Hunt, 330 ft. S, 350 ft. W line of SE SW, Sur. 46.
Bldg. derrick.
Magnolia Pet. Co.'s No. 36 D.C.R.C., 330 ft. S line, 990 ft. W line, Sur. 209.
Drlg. shale 2,103 ft.
Magnolia's No. 9 Riley, 330 ft. from S line, 1,650 ft. from W line, Sur. No. 4.
T.D. 2,276 ft.; testing sand from 2,269-76 ft.; set 10-in. csg. at 2,269 ft.
Magnolia Pet. Co.'s No. 35 D.C.R.C., 330 ft. from N and W lines of SW Sur. 209.
Sand 2,302-90 ft.; set 7-in. at 2,302 ft.; T.D. 2,323 ft.; comp. 8 bbls. per hr.
Magnolia Pet. Co.'s No. 8 J. O. Wilson, 330 ft. from N line, 825 ft. from W line of Sur. 134.
Rig up.
Reid and McKay's No. 11 Lundell, 1,320 ft. from W line, 660 ft. from N line of NW of Sur. No. 60.
Sand 2,170-2,241 ft.; 5 3/16-in. csg. 2,170 ft.; W.O.C.
Reynosa Oil Corp.'s No. 1 Duval County Ranch Co., 330 ft. from S and W lines of Sur. 342.
Standing 1,200 ft.
Smith & Story's No. 10 Lundell, 330 ft. from S and E lines of SE NE of Sur. 48.
Sand 2,266-71 ft.; set 7-in. csg. 2,265 ft.; W.O.C.
Sun Oil Co.'s No. 72 Welderkehr, making location in Sur. No. 2.
Testing sand 2,243-53 ft.; set 7-inch csg. 2,235 ft.
Trapshooter Reilly's No. 1-B C. W. Hahl, 150 ft. from E line, 200 ft. from S line of Blk. 33, Sur. 250.
Drlg. 405 ft.
E. F. Wilson's No. 1-A A. Broadbeck, 330 ft. from N and W lines of SW SE Sec. 16.
Derrick.

LUCAS—LIVE OAK COUNTY

Lion Oil & Ref. Co.'s No. 2 McNeil, J. Curry Sur., 660 ft. N of No. 1.
Drlg. shale 2,602 ft.
Houston Oil Co.'s No. 27 Cartwright, 1,000 ft. NW of No. 10 on 11,359-ac. tract in Choichado Sur.
Comp. at 3,500 ft.

FORDYCE—HIDALGO COUNTY

Alamo Drlg. Co.'s No. 1 Ed Sullivan, 150 ft. from N and W lines of 3.25-ac. tract, in Tract 283-284, Por. 39, 1,700 ft. SE of No. 1 Lawrence.
Drlg. shale 1,105 ft.
Alamo Drlg. Co.'s No. 1 E. Flores, 150 ft. from N and W lines of Tract 266, Por. 38.
Location.
Alamo Drlg. Co.'s No. 2 E. Flores, 150 ft. from W line, 225 ft. from S line of Tract 266, Por. 38, J. of Reynosa.
Location.
C. C. Bishop's No. 1 F. B. Guerra, Tract 254, Por. 39, NE of discovery well.
Rig.
Blocker & Lucky's No. 1 F. B. Guerra, 330 ft. from S and W lines of W½ of E 20-ac., Share 254, Por. 39.
Spudded.
Clements et al's No. 1 F. B. Guerra, Tract 254, Por. 39.
Derrick.
Jack Clements' No. 1 Felipe Farias, 150 ft. from N and E lines of Share 273, Por. 39, Reynosa.
Location.
Danvers-Harrison & Davis' No. 1 Dr. Austin, center of E 7.2-ac. of S 14.4-ac. in Share 282, Por. 39.
Location.
M. Porter Evans' No. 1 John M. Lawrence, 330 ft. from N and W lines of W 19.04-ac., Share 274, Por. 39.
Location.
Porter Evans' No. 1 David Flores, Tract 262, Por. 38.
Location.
Heep Oil Co.'s No. 1 John Lawrence, 241 ft. from E line, 226 ft. from N line of SE 5 acres in Tract 274, Por. 39.
Location.
Heep Oil Co.'s No. 1 Guerra, 330 ft. from W line, 185 ft. from N line of 25-ac. tract in Por. 40.
Location.
Heep Oil Co.'s No. 1 T. de Flores, Tract 254, Por. 39, 1,500 ft. SE of discovery well.
Drlg. shale 1,620 ft.
Heep Oil Co.'s No. 1 Seabury, George & Taylor, 330 ft. from S and E lines of SE 25.9-ac. of Tract 254, Por. 38.
Cmtd. surface csg. 200 ft.
McCollum Explrn. Co.'s No. 1 John C. Engelman, 400 ft. from S and W lines of Lot 3, Blk. 79, Mestenas Tract.
Rig.
Moncrief & Showers' No. 1 F. B. Guerra, 330 ft. from N and E lines of NE of W 40 acres of S 80 acres of W½ of Share 254, Por. 39, J. of Reynosa.
Drlg. shale 625 ft.
Reynosa Oil Co.'s No. 1 P. S. Rivas, 330 ft. from N line, 258 ft. from W line of N 30-ac., Tract 395, Por. 39.
Location.
Ed Sullivan's No. 1 E. B. Guerra, center of NE 10.77 acres of SW 40.7 acres of Tract 254, Por. 39.
Location.
Van Dresar et al's No. 1 W. R. Jackson, 330 ft. from N and W lines of 92-ac. tract, Por. 38-39-40, Blk. 278.
Location.
Otto Woods' No. 1 F. B. Guerra, 1,700 ft. NW of discovery well.
T.D. 200 ft.; set surface csg. 200 ft.
Otto Woods' No. 2 F. B. Guerra, 600 ft. due N of discovery well, Tract 254, Por. 39.
Rigging up.
Otto Woods' No. 2 John Lawrence, 330 ft. from N and E lines of W 40 acres of Tract 274, Por. 39.
Location.
Otto Woods' No. 3 John Lawrence, 330 ft. from S and W lines of W 40 acres of Tract 274, Por. 39.
Location.
Otto Woods' No. 4 John Lawrence, 330 ft. from E line, 250 ft. from S line of W 40 acres, Tract 274, Por. 39.
Location.
Windsor Oil and Circle W Oil Co.'s No. 1 J. H. Doss, 330 ft. from N and W lines of 55 acres or in Tract 278, Por. 40.
Location.

JACOB POOL—McMULLEN COUNTY

Benson et al's No. 9 John Stis, midway between No. 1 and No. 6, Blk. 40, Sur. 7.
T.D. 1,600 ft.; P.B. to 704 ft.; W.O.C.
E. W. Hopkins' No. 1 H. L. Lark, 160 ft. from N and W lines of W half of Blk. 30, Scrugham Sur.
T.D. 950 ft.; coring.
Kennon's No. 3 Lark, 660 ft. from N line 330 ft. from E line of E½ of Blk. 15 Scrugham Sur.
T.D. 1,067 ft.; P.B. to 1,061 ft.; to pump.
C. R. Kennon's No. 4 H. L. Lark, 175 ft. from S line, 175 ft. from W line of E 20-ac. of Blk. 15 of Scrugham Sur.
Location.
C. R. Kennon's No. 5 H. L. Lark, 175 ft. from S and E lines of E half of Blk. 15 of Scrugham Sur.
Location.
Loma Oil Co.'s No. 23-A Jacob, 660 ft. S of No. 11-A, Sur. No. 8.
T.D. 974 ft.; set 6⅝-in. csg. 960 ft.; W.O.C.
Slemp & Hockaday's No. 1 Lark, 1,320 ft. N of No. 3 Longhorn, in Scrugham Sur.
T.D. 1,032 ft.; 250 ft. of oil in hole, prepare to pump.
Stewart & Holding Co.'s No. 3 Jacob, 660 ft. S and 660 ft. E of No. 2, John Fadden Sur.
Moving in.
Ormsby & Stewart's No. 4 Jacob, one-half mi. S of No. 3.
Drlg. 700 ft.
A. P. Pierce's No. 1 Lark, 150 ft. out of NW cor. Blk. 41, Schrugham Sur.
Abnd. 1,053 ft.
Stewart-Smith & Storey's No. 2 L. Jacobs, John Fadden Sur. No. 8, 660 ft. E of No. 1.
T.D. 870 ft.; comp. and shut in.
Texio Oil Co.'s No. 2 L. Jacob, 660 ft. N of No. 1 Benham Sur.
Location.
R. P. Whitefield's No. 1-A Jacob, 1,500 ft. from W line, 1,200 ft. from S line of SW of Sur. 17.
Drlg. 200 ft.

SINTON—SAN PATRICIO COUNTY

Heep Oil Corp.'s No. 2 R. Welder, 466 ft. from S line, 2,000 ft. from E line of Adeline Welder tract in Victor Loupsey Sur.
Derrick.
Heep Oil Corp.'s No. 4 R. Welder, 466 ft. from S and W lines, 300-ac. tract, Victor Loupsey Sur.
Drlg. shale and lime 6,451 ft.
Petrol Corp.'s No. 1 R. H. Welder, 467 ft. from S and E lines of 300-ac. tract.
T.D. 6,028 ft.; P.B. to 5,200 ft.; sidetracked to 6,000 ft.; comp. making considerable gas with est. 40 to 50 bbls. oil dly.; 1,900 lbs. pres.

LOS OLMOS—STARR COUNTY

J. P. Kennedy's No. 8 Kelsey-Bass, 200 ft. SE of No. 7 Kelsey-Bass in Blk. 7 of Porcions 75, 76 and 77.
Location.

CUEVITAS POOL—STARR COUNTY

Sun Oil Co.'s No. 5-C M. Guerra & Son, 1,320 ft. NE of No. 4-C La Sacatosa grant.
Location.

AGUA DULCE—NUECES COUNTY

Clymore Prod.'s No. 3 Ingram, 660 ft. from E and S lines, Sec. 6, Blk. 6, Peters Subd.
Derrick down.
Clymore Prod. Co.'s No. 2-D Ingram, 660 ft. from S and W lines of Lot No. 7, Sec. 6, Peters Subd. No. 2.
Location.
Clymore Prod. Co.'s No. 1-C Ollie Purl, 660 ft. N and E lines of Lot No. 2, Sec. 7, Peters Subd. No. 2.
Moving in rig.

SAXET—NUECES COUNTY

Southern Mineral Corp.'s No. 3 Ocher, 3,159 ft. N of S line and 417 ft. from line of Ocher 202.52-ac. tract in Sec. 8.
Location.
Southern Mineral Corp.'s No. 4 Ocher, 1,320 ft. S line and 417 ft. E line of Ocher 202.52-ac. tract in Sec. 8.
Location.

WEST COLE POOL—WEBB COUNTY

American Liberty Oil Co.'s No. 1-B Bruni estate, 418 ft. from NE line, 260 ft. from NW line of Blk. 13.
Drlg. 2,005 ft.
American Liberty Oil Co.'s No. 5-A Bruni Est., 418 ft. NE, 260 ft. NW lines, Blk. 49, Foltz Subd., Arispe grant.
T.D. 100 ft.; set csg.; W.O.C.
Herman Brown's No. 2 Bruni Est., 418 ft. from NE line, 260 ft. from SE line of Blk. 8, Foltz Subd., Sur. 5, Arispe grant.
Drlg. 2,582 ft.
Cole Pet. Co.'s No. 56 Benavides, Sur. No. 1, Callaghan homestead tract.
Coring 3,798 ft.
O. W. Killam's No. 27 Bruni, 1,309 ft. from SW line, 2,346 ft. from SE line of Sur. No. 6, Arispe Grant Sur.
Drlg. 2,981 ft.; gas sand 2,291-2,330 ft.
Kalmore's No. 1-B Bruni, 330 ft. to W line, 418 ft. SW line, Blk. 23, Sur. 5, Adams Subd., Mariano Arispe grant.
Sand 2,287-2,305 ft.; 6⅝-in. csg. 2,287 ft.
O. W. Killam's No. 25 Bruni (formerly No. 1 Kulmor), Sur. 6, Adams Subd., Mariano Arispe grant.
T.D. 3,424 ft.; to P.B. and sidetrack.
South Texas Oil Co.'s No. 13 Laurel, 800 ft. from W line, 150 ft. from S line, Blk. 4, Sur. 270.
Skidding derrick.
Sun Oil Co.'s No. 1 Bruni Est., 418 ft. NE line, 260 ft. SE line of Blk. 4, Sur. 5, Arispe grant.
Drlg. 310 ft.
United Prod. Corp.'s No. 5 Brennan Benavides, Mariano Arispe grant; common cor. Blks. 332, 333, 348, 349.
Drlg. sand with streaks of shale; T.D. 2,470 ft.

TAYLOR—WILLIAMSON COUNTY

Jackson et al's No. 1 Bozarth 95.8-ac. tract, 2,000 ft. from NW line, 3,500 ft. from NE line, S. Miller Sur.
Drlg. 1,400 ft.
G. L. Rowsey, trustee,'s No. 1 W. Heap, 1,100 ft. from SE line, Bushy Creek, 200 ft. from SW line of 92.3-ac. tract in H. White Sur.
T.D. 905 ft.; showing oil in Serpentine and preparing to set csg. and make a test
R. Wilder's No. 1 W. L. Cain, 300 ft. from N line, 180 ft. from E line of S half of Cain 100-ac. tract in S. Miller Sur.
Cmtd. csg.; T.D. 1,960 ft.

LAS ESCOBAS—ZAPATA COUNTY

A. J. Mickle's No. 1 Treveno, 150 ft. from S line, 300 ft. from E line of Blk. 14, Sur. 411.
T.D. 1,625 ft.; sand 1,621-35 ft.; comp. 30,000,000 ft. gas, 515 lbs. R.P.

JENNINGS—ZAPATA COUNTY

Texas Co.'s No. 56 Whitehead, 672 ft. from SE line, 18,433 ft. from SW line of Cerrito Blanco grant.
Location.

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Among Gulf Coast Drilling Contractors

One line of demarcation in the Gulf Coast that is going deeper and deeper, apparently, is the depth line to which the producing companies calculate it is safe to entrust wildcat and other wells to drilling contractors. In previous years, it was rare indeed for a contract to call for a depth below 6,500 feet. Wells drilled past this depth were almost invariably dug with company-owned rigs, supervised by practical men collaborating with members of company engineering staffs. In 1934, however, the picture has offered some distinct innovations. When Smith & McDannald accepted a contract to dig No. 1 Hermandez to 8,000 feet for the Superior Oil Co. at Bosco, Louisiana, then a wildcat area, they gave themselves, as "Cap" McDannald phrases it, "something to sit up nights with." When the hole was bottomed at 8,920 feet, and a good well brought in, there was jubilation in the ranks of the drilling contractors. The experience gained, however, has enabled the same contractors to drill a number of other wells in the same field, the deepest of which have gone to 8,802 feet, 8,771 feet, and 8,088 feet. Four rigs are now being operated by Smith & McDannald in the Bosco Field for the Superior Oil Co.

Edwards Drilling Co., under the direction of Harry Edwards, formerly general superintendent of the Humble Oil & Refining Co., has just completed a dry hole at Church Point, La., for Woodley Petroleum Co. and others, bottomed at 8,504 feet. The same contractors are drilling at 6,400 feet on an 8,500-foot contract well at Dickinson, Galveston County, Texas. Another well, originally drilled to 6,500 feet on Charenton Dome, St. Marys Parish, Louisiana, for Petroleum Exploration Co. and Roy Black and others, by the Edwards Drilling Co., is now to be drilled by the latter to 8,500 feet. Rig is moving in on this job.

A number of wells have been completed in the past few months to depths approximating 7,000 feet, or better. George Echols recently bottomed a wildcat well in Duval County for Sun Oil Co., carried as No. 1 Moreno, at 6,902 feet. This well was dug with a large gasoline rig. Rutherford Drilling Co. has completed one well at slightly more than 7,000 feet for the Skelly Oil Co. at Van Vleck, a high pressure area, and is washing in a second well offsetting the first. This latter well is bottomed at 7,073 feet. C.&R. G. Drilling Co. is preparing to spud No. 2 Maco Stewart for the Gillock Petroleum Co. in the Dickinson area, Galveston County, which may be carried to 8,000 feet or deeper.

George Echols has six rigs running at this time, as follows: One for Humble Oil & Refining Co., at Greta; one for the Continental Oil Co., on the Driscoll ranch, Duval County; one for the Jeffers Oil Co., Duval County; one for Sun Oil Co., in the new Bruni Field; one for the Sun Oil Co., on a deep test in Starr County; and one for the Texas Co. on the Sutherland ranch in Duval County.

Other contractors now drilling, or who set up to drill wells below the conventional 5,000 to 6,500-foot level, will be reported from time to time.

Ernest Powell, who has been making headquarters at Mission, has a contract to drill two wells for the Heep Oil Co. in the Fordyce Field, Hidalgo County.

Edwards Drilling Co. has a rig running for the Pure Oil Co. at Dickinson, Galveston County; one setting up for Petroleum Exploration Co. and Roy Black and others on Cheranton Dome, St. Marys Parish, Louisiana; one setting up on its own property at Big Creek, and one running for the Humble Oil & Refining Co., in East Texas.

Gholson Drilling Co. has started up on No. 1 Wells ranch, Starr County, for C. L. Smith and others. Rig has been standing on this location for several weeks.

Smith & McDannald have moved a second rig into Louise Field for the Pure Oil Co. to drill No. 2 Garrett. The company also has a new location in the Cayuga Field to drill for the Tide Water-Texas Seaboard Oil companies. Same contractors are also drilling the fourth well on their own properties in the Livingston Field, Polk County. Previously noted operations are in addition to four rigs running for the Superior Oil Co. in the Bosco Field, Louisiana.

L. W. Capps, well known Gulf Coast drilling contractor and producer, snapped at his No. 1 Vaughan, recently completed as a small producer in Waller County on the Brookshire Dome, also referred to as the Sealy and the San Felipe dome. Capps recently dug a deep hole for the Loring Oil & Gas Co. on the city-limits line of Houston in Westmoreland

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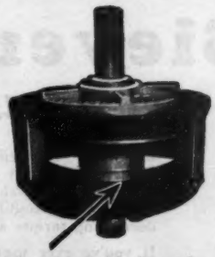
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New Kittrell Field in Houston County Set Back; Some Think Producing Area Will Be Small

By F. L. SINGLETON
Gulf Coast Bureau, The Oil and Gas Journal

HOUSTON, Tex., Oct. 8.—The new Kittrell Field, in the south part of Houston County, was given another setback during the week, when three tests failed to develop production after drilling below the producing horizon found in the discovery well. Boone Brothers' No. 1 Texas Long Leaf Lumber Co., 660 feet northeast of the discovery, in the Charles McEllis Survey No. A-382, was abandoned at 2,260 feet after it had failed to shown anything encouraging in cores taken from the Carrizo sand. Humble Oil & Refining Co.'s No. 1 Texas Long Leaf Lumber Co., a north offset, was drilling below 2,165 feet in sandy shale, without showing any oil or gas, and it probably will be abandoned during the week. One and one-half miles southwest of the discovery in the F. Willis Survey, Walker County, Eastern Texas Petroleum Co.'s No. 1 Texas Long Leaf Lumber Co. made a five-minute drill stem test from 2,000-20 feet and tested 270 feet of fresh water through a one-fourth inch choke on top and bottom and is coring at 2,060 feet. With an elevation of 261 feet at this depth, it is 41 feet lower than the bottom of the hole in the discovery and does not look so encouraging at this time. However there is a possibility of it being down dip far enough on the structure to encounter the sand at a deeper depth than the discovery. This is one of the most interesting tests drilling in the field and the outcome will have much bearing on other tests to be drilled in this direction. H. L. Hunt's No. 1 Ford, one-half mile northeast of the discovery, reported last week as a possible failure, has been abandoned at 2,608 feet, defining production in that direction. The same operator has abandoned location for his No. 1 Starr, in the John Walker Survey.

Second Producer

While failures were being recorded to the east and northeast of the discovery, Humble Oil & Refining Co.'s No. 1 Shaw, a northwest offset, was making its appearance as the second producer in the field by testing 210 feet of oil on a 10-minute drill stem test from 2,066-77 feet, through a one-quarter inch choke on top and bottom. It was drilled to 2,107 feet and plugged back to 2,077 feet. Six and five-eighths inch casing is now being run to the top of the sand at 2,069 feet. Based on top of the sand it is about 35 feet lower than the discovery; consequently production is not expected to extend much farther north. Within the next week the outcome of two tests due south and southeast of the discovery should be known. Over the line in Walker County, Lawrence and Flannery's No. 1 Texas Long Leaf Lumber Co. in the Mary Milsap Survey, is drilling below 1,000 feet in shale. It is about 1 mile southeast of the discovery. One-half mile due south of the discovery, in Houston County, Dick Hooper's No. 1 Mangum is drilling in shale below 1,500 feet.

The latest 24-hour production gauge on the discovery well showed it to be flowing 530 bbls. of fluid in 24 hours through an eleven-thirty-seconds inch choke ot which 5½ per cent was b.s. and fresh water. Tubing pressure was 160 pounds and casing pressure 560 pounds closed in. A total of 32 tank car loads of crude have been shipped from the operators' loading rack a few miles south of the discovery on the Trinity-Weldon Railroad. The operators are drilling a water well for their semiwildcat test in Walker County. It is 330 feet out of the northwest corner of the George Keilman Survey, about 3 miles southwest of their No. 1 Trinity State Bank.

Think Field May Be Small

Some petroleum engineers are of the opinion that the producing limits of the field will be confined to a rather small area, and have expressed their belief the oil coming from the Carrizo sand is being lifted to the surface by fresh water pressure rather than by salt water pressure. If this condition exists in the field, it will be the second instance in which fresh water has played a part in lifting oil.

Ben G. Barnett has made location in the L. R. Clapp Survey, Walker County, for his No. 1 W. A. Reynolds. Location is 330 feet out of the northwest corner of the northwest 20 acres of the south 93 acres of the Denton and Marshall lease. It is about 2 miles southeast of the discovery. It is reported he is to drill two free wells on this tract. Crown Central Petroleum Corp. is reported to have paid $400 cash for the south 20 acres of the west 50 acres of the F. E. Willis Survey, with the landowner retaining a one-quarter override. Weaver and Crim are reported to have paid $100 an acre cash for a one-half interest in all of Thompson Brothers' holdings within 2 miles of the discovery well. The number of acres purchased was approximately 1,700. C. C. Steinberger purchased a half royalty interest under the L. Pollard 50 acres in the L. Pollard Survey, Walker County. The price was reported to have been $250 an acre base. In the northwestern part of the same county, E. P. Kilgore and Ralph Johnston are moving in material for a 4,500-foot wildcat on their block of 3,800 acres. It is to be drilled on the Lamkin 1,000-acre tract in the J. J. Holcomb Survey. Location is 320 feet from the south line and 320 feet from the east line of lease and survey. Jack Powell of Houston has assembled a 1,200-acre block centering around the S. R. White 156-acre tract in the Jose Ortego Survey, Walker County, and is to start a 3,500-foot test within 30 days.

Brazoria County

Stanolind Oil & Gas Co. made location for its wildcat to be drilled on the Hastings prospect in the east part of Brazoria County. It is on the J. W. Surface lease in the A.C.H.&B. Survey, Abstract No. 462. Location is 466 feet north and 400 feet west of the most easterly southeast corner of 75.9-acre tract. Four miles southeast of Juliff in the H.T.&B. Survey, Turnbull and Irwin's No. 1 Braden is drilling shale below 6,277 feet. On the east bank of Chocolate Bayou in the L. Bachelder Survey No. 156, Amerada Petroleum Corp.'s No. 1 Houston Farm Development Co. cemented 11¾-inch casing at 6,736 feet and are now waiting on cement to set.

Chambers County

Chambers County received an interesting wildcat test during the week when Sun Oil Co. made location for its No. 1 Hamilton in the T.&N.O. Survey, Section 128. It is about 7 miles southwest of the town of Stowell and 11 miles southeast of Turnbull and Irwin's No. 1 Sudindorf, a wildcat recently abandoned. The company's geophysical crew has just got through shooting the area. Location is 400 feet from the north line and 400 feet from the west line of survey. In the

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Wildcat Operations on Gulf Coast

Week Ending October 6

RACCOON BEND—AUSTIN COUNTY

Humble O. & R. Co.'s No. 13 Robert Paine, 510 ft. at R/A from NW line and 460 ft. at R/A from NE line of 365-ac. tract, Wm. C. White Sur.
Drlg. sand 2,430 ft.

Humble O. & R. Co.'s No. 6 Bellville, W. C. White Sur.
Drlg. sand 2,430 ft.

Humble O. & R. Co.'s No. 1 Sherrill (D.D.), W. C. White Sur.; 650 ft. NE line and 400 ft. SE line.
Drlg. sandy shale 4,285 ft.

DANBURY—BRAZORIA COUNTY

Shell Pet. Corp.'s No. 7 Blakely-Winston, 63 deg. 11 min. E, 5,540 ft. N, 26 deg. 49 min. W, 200 ft. from SW cor. of Blakely-Winston 560-acre tract, H.T.&B. Sur. Location.

Shell Pet. Corp.'s No. 3 Haury, 800 ft. SE of No. 2 in line with No. 2 and No. 1 Blakely-Winston, H.&T.B. Sur. No. 13.
Drill pipe stuck 6,920 ft.

Shell Pet. Corp.'s No. 1-A Schmitt, 357 ft. E and 197 ft. from NW cor. of 146-ac. tract in J. H. Bruner Sur.
T.D. 2,540 ft.; to abandon.

DAMON MOUND—BRAZORIA COUNTY

Gulf Stream, Inc.'s No. 1 Cave Heirs, 160 ft. from N line and 60 ft. from E line of Lot C, Blk. 50, A. Darst Sur.
Location.

Reco's No. 1-D Wisdom, 25 ft. from S and W lines of Blk. D. Lot 5, A. Darst Sur.
Drlg. shale 1,460 ft.

Intercoastal Oil Co.'s No. 12 Wisdom, 90 ft. from N line and 75 ft. from W line of Lot A, Blk. 51, A. Darst Sur.
Drlg. lime 1,736 ft.

H. Windom's No. 1 Proctor, 40 ft. out of SW cor., Blk. 1, A. Darst Sur.
Comp. I.P. 30 bbls. per day pumping; T.D. 1,575 ft.

MANVEL—BRAZORIA COUNTY

Texas Co.'s No. 2-A Casolo, 200 ft. N and 200 ft. W of SE cor. of lease, Chas. O'Donnell Sur.
Rigging up.

Texas Co.'s No. 2 Scogel, 200 ft. S of N line of lease and 330 ft. SW of SW line of Belcher lease, Charles O'Donnell Sur. No. 74.
Drlg. shale 5,100 ft.

Texas Co.'s No. 4 Houston Oil Field Assn., 247 ft. S of N line and 441 ft. W of SE cor. of Lot No. 10, A.C.H.&B. Sur. No. 91.
Drlg. sandy shale 3,062 ft.

Gulf Prod. Co.'s No. 3 F. H. Colby, 330 ft. from SE and 330 ft. W from N cor. of Lot 19, SE offset to Windsor Oil Co.'s No. 1 Colby, T. Sproggins Sur.
Drlg. sand and shale 5,141 ft.

Harrison & Abercrombie's No. 1 Elving, C of Lot No. 15, H.B.&T. Sur.
Cutting and pulling drill pipe 3,400 ft.

Texas Co.'s No. 5 Houston Oil Field Assn., A.C.H.&B. Sur. No. 9 at C of Lot 22.
Comp. pumping 100 bbls. per day; T.D. 4,055 ft.

Texas Co.'s No. 7 Houston Oil Field Assn., 247.5 ft. S and 441.9 ft. W of NE cor. of Lot 8.
Rigging up.

Texas Co.'s No. 1-A Massey, 330 ft. out of NW cor. of 33-ac. tract in H. Stevens Sur.
Shale 7,310 ft.; prepare to core.

PLEDGER—BRAZORIA COUNTY

Humble O. & R. Co.'s No. 1 Bob McFarland, 535 ft. S, 1,900 ft. W of SE cor. W. C. Carson Sur.
Drlg. shale 5,951 ft.

(Continued on Page 81)

same county, but in the Barbers Hill Field, three producers were registered. Sinclair Prairie Oil Co.'s No. 18 Wilburn topped the sand at 5,026-40 feet and was completed for an initial production of 62 bbls. an hour through a three-eighths inch choke at a total depth of 5,041 feet. Texas Gulf Production Co.'s No. 2 Eberspacher was completed for an initial production of 168 bbls. by heads at a total depth of 5,337 feet. Nine and five-eighths inch casing was cemented at 5,296 feet. Yount Lee Oil Co.'s No. 26 Chambers, in the William Bloodgood Survey, cemented 9⅝-inch casing at 3,736 feet and was completed for an initial production of 310 bbls. at a total depth of 3,804 feet.

Liberty County

Magnolia Petroleum Co.'s No. 1 Maco Stewart, a wildcat in the northeast corner of Liberty County, in the A. Cherry Survey, 2 miles north of Rayburn, has been abandoned in lime at 5,890 feet. It topped the Massilina Pratti at 4,550 feet and the Hockleyensis at 4,608 feet. In the same county, Turnbull and Irwin and others' No. 1 Buffum, in the James Robeson Survey, was drilling in gumbo below 4,350 feet late in the week. This is one of the most watched wildcats drilling on the Gulf Coast, due to it checking about 400 feet high. Four cores taken from 3,967-4,070 feet showed some sand with no shows of oil or gas. Top of the Discorbis was reported to have been 3,570 feet.

Polk County

In the Livingston Field, Polk County, Gem Oil Co.'s No. 1 Kavanaugh in the A. Viesca Survey, cemented 7-inch casing at 4,212 feet, and through a one-fourth inch choke it flowed 67 bbls. of oil plus 1.8 per cent wash water in eight hours with tubing pressure 1,400 pounds and casing pressure 1,580 pounds. Total depth is 4,237 feet. Sun Oil Co.'s No. 1 Pratt, A. Viesca Survey, flowed 25 bbls. of distillate in 24 hours through one-fourth inch choke with tubing pressure 1,450 pounds and casing pressure 1,475 pounds. It is bottomed at 4,244 feet. Smith and McDannald's No. 1 Davis and Holmes, a recent location for the field in the A. Viesca Survey, is waiting on drill pipe at 3,716 feet. It is reported to have topped the Hockleyensis at 3,520 feet.

Refugio County

Four miles southeast of Refugio, Refugio County, Quintana Oil Co.'s No. 1-B O'Connor, a wildcat 6½ miles south of the Tomoconnor Field, created considerable excitement in that area during the week, when it tested 450 feet of oil in 10 minutes on a drill stem test from 5,898-5,936 feet. The pay in this test is about 100 feet deeper than the new sand found in same operator's No. 2-A Tom O'Connor, which was completed last week for an initial production of 35 bbls. an hour from sand at 5,796-5,808 feet. No. 1-B O'Connor is on a 4,000-acre block, of which Humble Oil & Refining Co. owns half interest.

Matagorda County

In the Van Vleck area, Matagorda County, Skelly Oil Co.'s No. 2 Cobb, located 1,600 feet northwest of the company's No. 1, a distillate producer, has been drilled deeper to 7,073 feet and the operators were testing late in the week at that depth. On a drill stem test last week it tested 300 feet of oil, gas and mud in 10 minutes. By drilling deeper the operators are in hopes of making it low enough in the sand to make producer. Location is in the Marie Cummings Survey.

Wharton County

In the Louise Field, Wharton County, Pure Oil Co.'s No. 1 Adams is due to be completed the latter part of the week. Nine and five-eighths inch casing has been cemented at 5,126 feet, and the operators are now waiting on cement to set. On a drill stem test from 5,126-35 feet it showed 25 fourbles of oil in 28 minutes from approximately 6 feet of sand. Location is in the NW cor. of Section 26 in the T. W. Heard Survey. It will extend the field a short distance northeast. In the same county, the wildcat test of Texas Gulf Production Co.'s No. 1 Kresta, 3 miles east of Louise in Section 54, W. B. Ivey Survey, was reaming at 6,343 feet, possibly to set casing.

Coleto Creek

In the Coleto Creek Field, Victoria County, Nutex Oil Co.'s No. 2 John Zimmer was swabbing an estimated 400 bbls. daily at a total depth of 2,339 feet, assuring the field of its second producer in that sand. It is 6 miles southwest of Victoria in the R. Manchola Survey. Rupert Cox' No. 1 John Zimmer has been completed for a gas well at a total depth of 2,857 feet, showing a gas pressure of 1,550 pounds. Location is in the R. Manchola Survey.

Galveston County

Two wells in the Dickinson area, Galveston County, have reached interesting depths. Humble Oil & Refining Co.'s No. 1-B Maco Stewart, in the John Sellers Survey, is drilling in shale below 6,385 feet. Pure Oil Co.' No. 1 J. W. Shelor in the B.B.B.&C. Survey is drilling below 6,135 feet in shale and boulders.

Conroe Field

Sterling Oil & Refining Co. has made a location in the Conroe Field, Montgomery County, on the E. C. Manning 160-acre lease in the T.&N.O. Survey on the east edge of the field, and it is being drilled in attempt to prove up its lease on the edge of the field. Cameron & Cameron's No. 1 Dudley, a south offset to Strake Petroleum Co.'s No. 1 Hammond, on the west edge of the field, was reported to have been completed for a producer, although no production gauge has been reported.

Boling Dome

On the east flank of Boling Dome, Fort Bend County, Irwin and Larsen and others have made a location for their No. 1 J. R. Farmer, 100 feet northwest and 100 feet southwest from east corner of a 125-acre lease, in the James Scott Survey. This is the third new test in the field within the past month.

SOUTH LOUISIANA

Superior Oil Producing Co.'s No. 1 Auguste Martinez, Acadia and St. Landry Parishes, in South Louisiana, swabbed salt water at 9,325 feet and is now plugging back to 9,103 feet to test some showings in the upper sands. This test was considered as having a good chance of opening production from the deep sand, after it had showed oil from 9,320-25 feet. Two new locations and one completion were registered in the field. Superior Oil Producing Co.'s No. 4 Larcade is in Section 35-8s-3e, and its No. 2 Arceneaux is in Section 33-8s-3e. The company's No. 1 Walter V. Larcade in Section 35-8s-3e, was completed for 343 bbls. on a 13-hour gauge from a total depth of 7,849 feet. Nine and five-eighths inch casing was cemented at 7,834 feet and was completed on a twelve-sixty-fourth inch tubing choke with casing closed. Tubing pressure was 1,510 pounds and casing pressure 1,700 pounds.

In the Gillis area, Calcasieu Parish, interest is being centered on Union Sulphur Co.'s No. 2 Barbe estate which is preparing to cement 6⅝-inch casing at top of an oil sand found at 6,760 feet. The operators are cementing casing without making a drill stem test with the hole bottomed at 6,768 feet in sand. The well was originally drilled to a total depth of

(Continued on Page 86)

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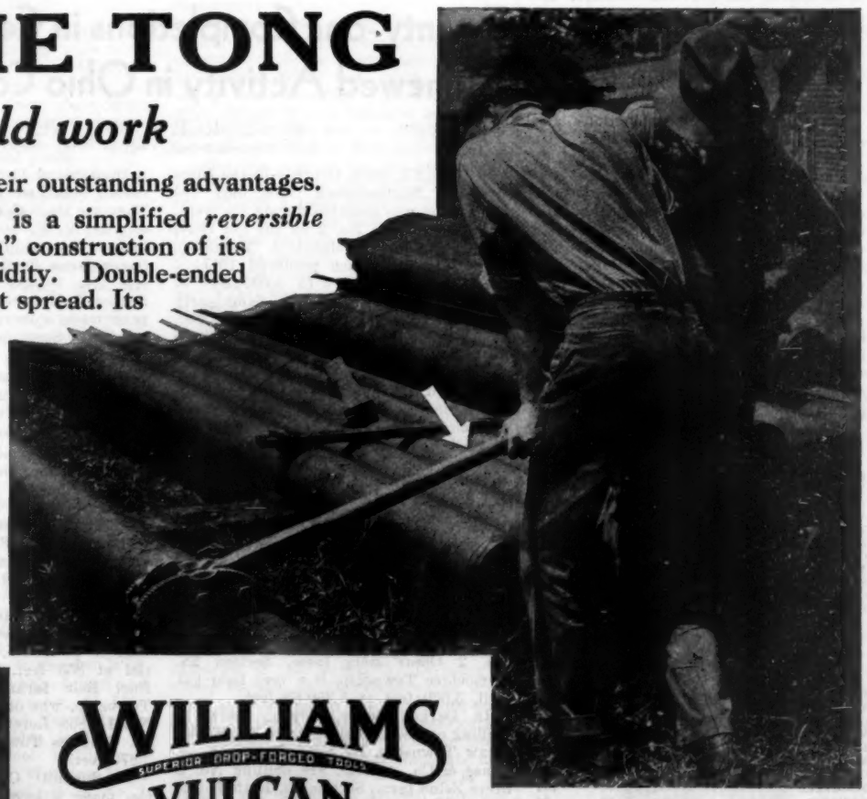

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Hope for New Dundee Pool in Ogemaw County; Seven Mile Extension of Mecosta Gas Field

By PAUL A. ELLIOTT
Staff Correspondent, Michigan Fields

MUSKEGON, Mich., Oct. 8.—Completion of two new Dundee oil producers of 300 and 200 bbls. a day in Ogemaw County, and successful drilling of a 7-mile southeast extension of the Mecosta-Montcalm County natural gas trend held the spotlight in Michigan last week. In addition to these developments of significance for the future more than 4,000 bbls. of new Dundee production was added by five successful completions and two acid treated wells in the big Porter Pool of Midland County.

Faced with this steadily mounting production, the Michigan proration committee announced the most stringent limitations on flush production yet required in an attempt to keep within the Federal allowable. The allowable, principally in the Porter Pool, was cut from 5 per cent over a minimum of 75 bbls. in effect during September to 2 per cent over a base of 70 bbls. a day.

Michigan's potential increased 19,784 bbls. from 155,366 bbls. as of September 1 to 162,674 bbls. as of October 1, the entire increase being represented by an upward movement in the potential of the Porter Pool which jumped from 142,098 bbls. to 162,674 bbls., or more than 20,500 bbls.

The increase boosted Michigan back to its peak after a sharp decline of about 20,000 bbls. from August 1 to September 1, or during the previous 30 days. The addition of 13 new producers in Porter Township Pool during the month was responsible for the return to peak figures in the big pool as well as the state totals.

Average Potential

Average potential production also showed an increase of 20.3 bbls. from 163.9 bbls. as of September 1, 1934, to 184.2 bbls. as of October 1, 1934, it was revealed. Actual runs revealed a decline of 1,040 bbls. a day although the daily average for the week ended September 29 was still 30,038 bbls. compared with a Federal allowable of 29,300 bbls. This was offset by daily underruns as high as 2,000 bbls. during summer months which now will be made up under an estimated daily production of 31,296 bbls. for October.

Comparative totals for September 1 and October 1 on number of wells, potential and estimated daily runs are as follows:

SEPTEMBER 1, 1934

Pool—	Wells	Potential	Runs
Porter	248	142,098	22,938
Yost	14	3,382	372
Greendale	310	4,107	4,107
Vernon	51	2,513	2,513
Leaton	27	581	581
Montcalm	4	1,863	503
Ogemaw	17	343	343
Muskegon	151	297	297
Saginaw	109	96	96
Oceana	14	56	56
Lapeer	3	30	30
State total	948	155,366	32,336

OCTOBER 1, 1934

Pool—	Wells	Potential	Runs
Porter	261	162,674	22,217
Yost	14	3,657	696
Greendale	306	3,704	3,704
Vernon	51	2,569	2,569
Leaton	27	620	620
Montcalm	4	815	280
Ogemaw	19	443	443
Muskegon	147	404	404
Saginaw	104	94	94
Oceana	15	139	139
Lapeer	3	30	30
State total	951	175,149	31,296

Ogemaw County

Successful completion of M. J. Ingold's No. 1 Ed Stevenson, C SE NE Section 24, Ogemaw Township, Ogemaw County, as a 300-bbl. initial Dundee producer and a northwest extension of this pool, 50 miles north of the Mount Pleasant area, has encouraged operators to hope for a new major Dundee pool.

The Ingold test topped the Dundee at 2,640 feet and drilled to 2,768 feet. It flowed 200 bbls. in 10 hours after being treated with acid and was estimated good for at least 300 bbls. a day.

McClanahan Oil Co.'s No. 1 O. A. Guilford, NE NE NW Section 29-22n-2e, West Branch Township, Ogemaw County, also made 180 bbls. in 21 hours after acid treatment and was judged good for at least 200 bbls. a day from the Dundee to which it was plugged back after drilling to 3,755 feet in a Monroe test.

Tex-O-Kan Royalty's No. 1 Allan S. Schneider, SE SW SE Section 17, also West Branch Township, was dry and abandoned as an unsuccessful Dundee test in Ogemaw County.

Ten other new and old tests in several sections of Ogemaw County, including Kerr and others' No. 1 Dack, Section 21, which has been standing for many months with a hole full of fluid struck in the Dundee, are drilling.

Greendale-Midland

Braniger, Giffert and Reasor's No. 2 Fred Sias, NE NW NE Section 8-14n-2w, Greendale Township, was dry and abandoned in the Dundee topped at 3,506 feet and drilling into water at 3,605 feet. L. G. Thompson's No. 1 Shirts in Section 17 made 100 bbls. a day after acid treatment. Two other dry holes were reported including D. F. Jones' No. 1, C SE NW Section 32-15n-6w, Sherman Township, Isabella County, dry in the Michigan gas sands and Fred Stork's No. 1 Hemlock Poultry Farm, SW SW NE Section 33, Richland Township, Saginaw County.

A dozen other wells are drilling in five Isabella County townships including Sherman, Broomfield, Rolland, Vernon and Danver.

Montcalm County

Allen Park Oil & Gas Co. brought in No. 1 Waite Stephens, SE SW SE Section 36-12n-6w, Home Township, Montcalm County, as a new and important extension gasser in the Michigan series flowing 2,200,000 feet a day. Michigan sands were topped at 1,348 feet and drilling discontinued at 1,352 feet.

The Stephens well is the farthest southeast of the Austin Township, Mecosta County Pool, of a number of wells recently drilled along the big general northwest and southeast trend through Mecosta and Montcalm Counties. It is 7 miles southeast of Old Dutch Oil & Gas Co.'s No. 1 Forgar in Belvidere Township and 2 miles southeast of the Rex Oil & Gas Co.'s duster on the Albaugh lease. The new well is about a mile south of Cedar Lake.

An interesting show of oil and gas also was encountered at 3,504-11 feet in Mammoth Petroleum Corp.'s No. 1 Lucy E. Thomas, NW SW SE Section 11, Home Township. Crude was tested and found to be 57 gravity, or considerably higher than any other Michigan crude. The well had several hundred feet of oil in the hole, the best show of any Dundee test in Montcalm.

Pure Oil Co. also was scheduled to test the Dundee this week in No. 1 Tenney, Section 3, Home Township. Several other tests are drilling at lesser depths.

Porter-Midland

Largest of five successful Dundee completions was Fred Turner and others' No. 2-B George Root, SE SE SW Section 21-13n-1w, the eighth well on an 80-acre lease. Dundee was topped at 3,375 feet and drilling was completed at 3,431 feet for 64 bbls. an hour to start and an estimated daily flow of 1,500 bbls.

Turner and others' No. 1 Harry J. Bond, SW NE SE Section 7, also Porter Township, made 20 bbls. an hour for an estimated 400 bbls. a day, topping Dundee at 3,404 feet, drilling to 3,450 feet and plugging back to 3,446 feet as an important northern extension.

Northern Oil & Gas Corp.'s No. 4 William Maywood Carter, SW NE SW Section 18, Porter Township, made 35 bbls. an hour or at the rate of 750 bbls. a day when drilled to 3,447 feet in the Dundee topped at 3,414 feet. Charles W. Teater and William R. Kales' No. 3 Frank Neitzke, SW NW NE Section 28, the southernmost well in the section, came in for 125 bbls. in the Dundee, while Pure Oil Co.'s No. 10 Mina Narmore, NW NW SW Section 15, was good for about 50 bbls. a day at 3,428 feet. Joe Trevor's No. 1 Second National Bank of Saginaw, SW SW NW Section 9, was dry and abandoned as a duster at 3,467 feet.

Sun Oil Co.'s No. 6 J. L. Miller, drilled into the Dundee the week before, was increased from 130 to 1,150 bbls., or a jump of 1,120 bbls., while Gordon Oil Co.'s No. 2 Raynor, Section 18, increased from 90 to 200 bbls., adding 110 bbls. a day.

New Locations

Six new permits to drill were issued by the Michigan conservation department during the week ended October 3. Three were for rank wildcats and three for wells in proved fields. The wildcats are: McClanahan Oil Co.'s No. 1 D. Ross and Hazel Sullivan, NE SW NW Section 33-12n-3w, Pine River Township, Gratiot County; Fred W. Turner and others' No. 1 Sunrise Community, SE SW SE Section 6-10n-4e, Albee Township, Saginaw County, and Daily Crude Oil Co.'s No. 1 J. O. Rouen, SW SE SW Section 24-16n-10w, Green Township, Mecosta County.

L. K. Chamberlain, trustee's No. 1 Allied, NW SW NW Section 27-13n-1w, and McClanahan Oil Co.'s No. 2 E. Breu, NE SW SE Section 20, both in Porter Township, Midland County, and Joseph Malloy and associates' No. 1, NW NW SE Section 19-22n-2e, West Branch Township, Ogemaw County, are in proved territory.

Twenty-one Completions in Central Ohio; Renewed Activity in Ohio County, Ky.

By GEORGE A. WHITNEY
Staff Correspondent, Central West Fields

FINDLAY, Ohio, Oct. 8.—In the Lima Field of Northwestern Ohio, only one completion was reported during the week, John Doblinger's No. 2 on the Sol Betts farm, Section 8, Monclova Township, Lucas County, which produced 10 bbls. in 48 hours, along with 5,000 feet of gas at a depth of 1,292 feet. Same party is drilling No. 2 Dan Knauss farm, Section 8, same township. Two advance tests are under way in Henry County by P. D. Snorby. One is on the Carrey heirs farm, Section 6, Marion Township, and the other on the Amelia Badenhop farm, Section 5, same township. In Hoagland Township, Auglaize County, N. E. Masters is drilling on the J. P. Wisner farm, Section 35. In Shelby County, Eilerman Oil Co. is drilling No. 1 Mrs. H. G. Fisher farm, Section 24, Cynthian Township.

In Wyandot County, New Oil Co. is drilling below 250 feet in No. 7 Minor Koehler farm, Section 20, Crane Township, and Wood & Co. are below 250 feet in No. 2 Edward Orton farm, Section 22, Pitt Township. Plank Oil Co.'s No. 2 Oscar Berg farm, Section 28, Tymochtee Township, is a very light gas well, 3,000 feet at 1,359-68 feet.

In Darke County, Adrian Tester is drilling on the C. Brown farm, in Mississinawa Township. In Allen County, L. J. Pease & Co., trustee, are drilling No. 3 Steve Zelno farm, Section 14, Bath Township. Hoffman and others are drilling No. 1 Anna C. Sharf farm, Section 18, Pleasant Township, Hardin County.

CENTRAL OHIO

In Central Ohio Field there were 21 completions, three oil wells with an initial of 82 bbls., 14 gas wells and four dry holes.

In Ashland County no oil wells were found, but three new wells are drilling. They are Ohio Fuel Gas Co.'s No. 1-5,845 on the W. E. Moore farm, Section 20, Jackson Township; No. 1-5,874 G. Heffelfinger farm, Section 33, same township, and No. 1-5,839 John Mutchler farm, Section 3, Hanover Township. Same company made a location for No. 1-5,920 on the Tully Scott farm, Section 32, Perry Township.

In Lorain County, Wittmer Oil & Gas Co.'s No. 1 on the James C. Aldrick farm, Lot 62, Grafton Township, is a dry hole at 2,493 feet.

In Holmes County, Ohio Fuel Gas Co.'s No. 1-5,848 on the Leo J. Haudenschild farm, Section 15, Washington Township, is a gas well at 3,104 feet. Same company made a location for No. 1 Adaline McKinley farm, Section 27, same township, and is drilling No. 1-5,886 Birt B. Finney farm, Section 26, Monroe Township.

In Wayne County, Harmon & George's No. 3 Henry Hagerman farm, Section 20, Chester Township, produced 25 bbls. initial at 865 feet. David Shafer's No. 1 Earl Belz farm, Section 16, Cannon Township, was dry. Ohio Fuel Gas Co.'s No. 1-5,868 Lorenzo Keen farm, Section 12, Congress Township, is a gas well at 2,870 feet.

In Summitt County, East Ohio Gas Co. made a location for No. 4 on the Everette Bexler farm, Section 17, Green Township.

In Marion County, Claridon Oil Co. is shut down on the H. C. Barnhardt farm, Section 11, Claridon Township, at 2,180 feet.

In Knox County, Lacknett and others' No. 1 George Lepley farm, Lot 4, Butler

(Continued on Next Page)

Central West Fields

(Continued from Preceding Page)

Township, is a gas well. Same parties are drilling No. 3 Oliver Mills farm, Lot 4, same township. Ohio Fuel Gas Co. has a location for No. 3 George Beckley farm, Section 1, Jackson Township. In Brown Township, Reed Brothers have a rig for No. 4 Blanch Reed farm, Section 14, and Upham Gas Co. has a rig for No. 2 David E. Keck farm, same section.

Coshocton County

In Coshocton County, Preston Oil Co.'s No. 3-1,546 on the D. S. Snyder farm, in the Third-quarter section, Newcastle Township, produced an initial of 25 bbls. at 3,306 feet. Pure Oil Co. is drilling No. 4 Ray Hayes farm, Section 5, Perry Township. Kundtz-Hulse, Inc., is drilling No. 4 French Allen farm in the Third-quarter section, Newcastle Township. Ohio Fuel Gas Co. is drilling No. 3-5,859 Victor Scheibe farm, Lot 11, Clark Township.

In Licking County, G. H. Long & Co. are drilling No. 2 Elza J. Fulton farm, in 15¼ Section of Madison Township, Blue Rock Oil Co. is drilling No. 6 on the Walter Hoyt farm, Section 17, Perry Township.

In Muskingum County the Ohio Fuel Gas Co.'s No. 1-5,858 Allen Mattingly farm, Section 18, Muskingum Township, is a gas well at 3,352 feet. Whitehill and others are drilling No. 5 John Bayer farm, in Hopewell Township.

In Athens County, Ohio Fuel Gas Co.'s No. 1-4,653 S. E. Searles farm, Section 12, Lee Township, was dry at 1,286 feet. Same company has a location for No. 14-5,922 on the Black Diamond Coal Co.'s tract, Section 23, Berne Township, and is drilling 25 Associated Co.'s No. 4, W. E. Henthorn farm, Section 17, same township. In Carthage Township, Nuzum and others are drilling on the John Smith farm, Fractional Section 34. A. D. Townsend is drilling No. 1 Leo Douglass farm, in Fractional Section 23, Lodi Township. Martin Brothers are drilling No. 22 Ella Martin farm, Lot 1,078, same township, and Frank Russell is drilling No. 13, Cozzins-Martin farm, Lot 14, Palmer Township.

In Tuscarawas County, Frey and others' No. 1 on the Fairfield Brick Co.'s property, Lot 4, Fairfield Township, is a gas well at 876 feet. Frank Walton and others have a rig on the Joseph Dunlap farm, Lot 12, Rush Township. In Goshen Township, Columbia Carbon Co. is drilling on the R. H. Williamson farm, Lot 43, and Glass & Perkins are shut down at 4,954 feet on No. 1 James Mascotti farm, Lot 33, also in Goshen Township. Capital Drilling Co. is drilling No. 6 Stewart Asher farm, Lot 19, Washington Township.

In Stark County, East Ohio Gas Co.'s No. 3 Charles Pontius farm, Section 16, Plain Township, is a gas well at 4,552 feet. Brendel Producing Co.'s No. 3 I. and E. Markley farm, Section 9, is a gas well at 4,535 feet. McFarland and others' No. 1 on the Catherine Schumacher farm, Section 21, same township, is a gas well at 4,561 feet. East Ohio Gas Co. is drilling No. 1 Katherine Belden farm, Section 19, same township, and has a rig for No. 1 Frank E. Case farm, Section 14, same township. In Lawrence Township, McClay Brothers are drilling on the J. and G. Lester farm, Section 6, in Perry Township. White & Lyons are drilling on the Hattie Leaman farm, Section 26. McFarland and others are reported below 4,250 feet in No. 1 on the Edward A. Frank farm, Section 12, Jackson Township.

In Guernsey County, George Jewell's No. 1 Carl Weaver farm, Section 5, Monroe Township, produced an initial of 32 bbls. at 3,633 feet. Four Leaf Clover Oil & Gas Co. is drilling No. 2 John R. Sager farm, Section 11, Wheeling Township. C. C. Wharton is drilling No. 3 H. & H. Mary Turner farm, Section 10, Westland Township. In Millwood Township, Preston Oil Co. made a location for No. 1 Rhea R. Lent farm, Section 10, and Jewell & Hammond are drilling No. 1 J. M. Dillon farm, Section 32, same township, and J. T. Rosch and others are drilling No. 4 Michael Sherby farm, Section 13, Jackson Township. In Willis Township, Wilber Keith's No. 2 Bert H. Foraker farm, Lot 20, is a gas well at 1,534 feet. Ferguson and McCullough are drilling No. 1 Frances R. Foraker farm, Section 2.

Gallia County

In Gallia County, five wells are being drilled and may open some new territory.

In Scioto County, Ronshausen and others' test on the Vernon C. Purdy farm, Section 33, Madison Township, is a gas well at 335 feet.

In Meigs County there is an unusual activity of late. In Lebanon Township, Ohio Fuel Gas Co.'s No. 1-5,870 on the Arthur Lovell farm, Section 25, is a gas well at 1,948 feet. A. N. Bengel's No. 1 on the Gusta Burch Surf farm, Section 19, is a gas well at 2,077 feet, and P. & G. Oil & Gas Co.'s No. 1 E. M. Winters farm, Section 35, same township, was dry at 2,006 feet. In Rutland Township, Ohio Fuel Gas Co.'s No. 1 on the F. J. Hysell farm, in the two Third-Quarter Section, is a gas well at 848 feet. Barton & Utsinger's test on the Alice Saxton farm, Section 8, Rutland Township, is a gas well at 850 feet. Same company is drilling No. 2 Elmer J. Searles farm, Section 8, same township. Meigs Development Co. is drilling No. 1 Melinda Luckadoo farm, Section 8. Same company is drilling No. 4 on the R. D. and G. Chapman farm, Section 5. McCurdy, Berg & Co. are drilling No. 1 Effie M. Haley farm, Section 8, same township. Rutland Gas Co. is drilling No. 3 F. L. McKnight farm, Section 2. In Lebanon Township, John Mayer and others are drilling No. 1 Mona Williams farm, Section 8, same township, and Ohio Fuel Gas Co. has a location for No. 1 Arthur Lovett farm, Section 25, same township.

In Lawrence County, R. Schaub is drilling on the Caughlin Hunt farm, Section 35, Windsor Township.

KENTUCKY

Kentucky appears to be rushing development work and the big play is in Ohio County, where the oil is found at shallow depths. There were 28 completions within a short time; eight were dry and 20 were producers with a combined initial production of 1,730 bbls. This oil is of a very good grade.

In Ohio County, it looks as though the Oak Station Pool is the best discovered for some time. In this pool Cumberland Petroleum Co. and others are getting a nice harvest. Cumberland Petroleum Co.'s No. 1 Rolla Richards farm, produced 50 bbls.; No. 2 same farm, No. 2 showed 75 bbls.; Nos. 3, 4 and 8, produced each an initial of 100 bbls. No. 5 had an initial of 85 bbls.; No. 6 had 60 bbls., and No. 7 an initial of 55 bbls.

W. E. Hupp and others' No. 3 on the right-of-way of the L.&N.R. Road produced an initial of 45 bbls. The Petroleum Co.'s No. 3 Jones produced 130 bbls. initial and No. 4 Jones farm produced 150 bbls. initial. Vickers and others' Nos. 3 and 4, Jones farm, had initials of 125 and 140 bbls. The Petroleum Co.'s No. 2 Jones farm showed an initial of 75 bbls. Vickers and others' No. 5 Sally Jones farm had an initial of 85 bbls. A. Carpenter and others' No. 1 Petit farm produced 80 bbls. initial. W. E. Hupp and others' No. 2 on the L.&N.R.R. right-of-way showed 100 bbls. initial.

In the Roberts Pool of Ohio County, Mark Bell & Co.'s No. 2 Charles Wedding farm produced 100 bbls. initial and No. 3 Charles Wedding farm, 45 bbls. initial. Miller and others' No. 2 Jasper Roberts farm made 70 bbls. initial.

In the Fordsville Pool Duffin and others' No. 1 Cynthian Wedding farm, was dry. W. E. Hupp and others' No. 1 Luther Noel farm was dry at 427 feet. Mecca Oil Co.'s No. 3 W. Smith farm, 1 mile south of Fordsville, was dry at 400 feet.

Kentucky Producers Co.'s No. 1 A Mills farm, south of Ellmitch, was dry at 350 feet. J. C. Miller and others' No. 1 E. Templeton farm, was dry at 328 feet. J. C. Miller & Co.'s No. 1 S. Winkler farm, was dry. Mark Bell and others' No. 1 A. Miller farm, Roberts Pool, was dry. Snowden-McSweeney Co.'s No. 11, G. E. Fuqua farm, was a dry hole at 375 feet.

In Hancock County Joseph B. Mayers' No. 7 Jesse Stewart farm, in the Matthews Pool, produced 50 bbls. and Sand Petroleum Co.'s No. 2 C. H. Smith farm made 50 bbls. initial. Younker, Early and others' No. 7 J. H. Smith farm, was drilled through the Jet sand to 375 feet, and was dry. W. E. Hupp and others are drilling No. 3 Dan Burke, in the Matthews Pool, and are drilling No. 11 on the Preston Matthews farm. The Petroleum Co. is drilling No. 3 William Bailey farm, same pool.

INDIANA

In Sullivan County, Yeager and others' No. 2 J. Hunt farm, Section 6, Fairbanks Township, produced an initial of 30 bbls. at a total depth of 1,770 feet.

In Pike County, F. B. Hillis Corp.'s No. 5 W. H. Lindy farm, NE SW Section 31, Clay Township, produced 15 bbls. initial at 1,313 feet. In Madison Township, same county, Bruner & Abbott abandoned Nos. 5 and 7 D. M. Shawhan farm. H. C. Darby and others are drilling No. 1 Samuel Dearing farm, SW SW Section 29, Lockhart Township, same county.

In Warrick County, W. C. McBride is drilling No. 1 Emily Ricketts farm, Section 6, Hart Township.

Special Bits Used to Drill Heaving Shales

HOUSTON, Tex., Oct. 8.—Interest of operators on the Gulf Coast is being directed toward Continental Oil Co.'s attempt to drill through heaving shale at Citrus Grove, Matagorda County. In the attempt, a procedure which has been followed only in a few other instances is being used on Continental's test, which is being drilled by William V. Bowles, contractor.

The shale, one of the most dreaded obstacles in coastal deep drilling, was encountered in the Citrus Grove test a little above 6,270 feet, where 9⅝-inch casing was cemented. Previously two other strings of pipe had been run, these consisting of 200 feet of 18⅝-inch casing and 1,965 feet of 13⅜-inch casing.

After the plug of the 9⅝-inch casing was drilled out the hole was drilled into the shale to a total depth of 6,657 feet, using special drilling fluid and chemicals. It then was decided to run another string of pipe to protect the hole. For this string flush joint 7⅝-inch casing was used. This was rotated in on a specially built bit, made of soft metal, which could be milled out when the casing was landed. It was possible to get the casing only to 46 feet of bottom where it was seated but not cemented.

The bit then was milled out and a string of 5½-inch flush joint casing used as drill pipe, and with another specially built bit the hole was carried to 6,960 feet, at which depth it was impossible to go further. The bit on this then was milled out and a string of 3½-inch flush pipe run in as drill pipe, using another specially built bit. Since then another 35 feet of hole has been made.

PETROLEUM LIBRARIES

At a meeting of Special Libraries Association a Petroleum Section was formed within its Science-Technology group. The intention of this section is: To bring in closer contact all librarians whose work deals with petroleum and its applied subjects; to make a Decimal Classification of Petroleum Subjects; to facilitate interlibrary loans; to exchange duplicate material. Any librarian interested is requested to write Albert Althoff, librarian, General Petroleum Corp. of California, 2525 East Thirty-seventh Street, Los Angeles, Calif.

T. C. GRIFFIN DIES

Timothy Charles Griffin, 72 years old, drilling contractor who came to Tulsa 30 years ago, died last week after being in ill health seven years.

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. . . when you use DU PONT GASOLINE ANTIOXIDANTS

GASOLINE which has been treated with sulfuric acid frequently liberates sulfur dioxide on redistillation. This causes corrosion of the equipment and loss of color in the distillate.

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Use DU PONT ANTIOXIDANTS

Oklahoma Production Again Kept at Low Point; Only Routine Completions Marked the Week

By JAMES McINTYRE

The past week saw the completion of no very important wells in Oklahoma. Important pools like Crescent, Lucien, Polo and Fitts had no new oil wells in the near-completion stage and there was nothing startling presented by the older big fields, like Oklahoma City and Seminole.

The most interesting wildcat in the State at this time is Anderson & Kerr and others' No. 1 Wilson, NW NW SE Section 27-10-1e, in Cleveland County. It is drilling on the big Newalla structure. Late Saturday the well was drilling at 6,167 feet, in sandy dolomite, with a show of oil. It found gas higher up in the Simpson series. Casing has been ordered but drilling will be continued until its arrival. Operators interested in the wildcat in addition to Anderson & Kerr are Stanolind Oil & Gas Co., Amerada Petroleum Corp., Slick-Urschel, Inc., Sinclair Prairie Oil Co., Carter Oil Co. and Frank Hollenback. The block consists of 2,660 acres.

Estimated Production

Estimated production by pool in Oklahoma for the week ending October 6 and for the preceding week follows:

	Barrels	
	Oct. 6	Sept. 29
Allen	7,250	7,950
Blackwell district	4,900	4,850
Bristow-Slick	10,500	10,500
Cushing-Shamrock	13,500	13,500
Chandler district	6,700	6,500
Davenport	750	750
Healdton	9,400	9,400
Hewitt	5,000	5,075
Burbank	9,100	9,100
South Burbank	9,150	9,600
Balance of Osage	25,000	25,000
Lucien	6,950	9,540
Crescent	3,550	3,395
Marshall-Lovell	1,150	1,175
Bowlegs	8,625	10,650
Carr City	3,800	4,670
Earlsboro	6,800	8,900
East Earlsboro	6,700	7,655
South Earlsboro	725	750
Little River	10,500	12,390
East Little River	575	550
Seminole	8,375	9,850
East Seminole	1,275	1,315
Searight	2,400	2,475
Maud	925	1,025
Mission	2,550	2,815
St. Louis-Pearson	16,775	16,605
Keokuk	825	1,495
Cromwell	4,600	4,600
Papoose	1,300	1,300
Oklahoma City	126,050	139,270
Asher-West Asher	1,275	1,550
Tatums	5,580	7,035
Sholem-Alechem	4,250	4,250
Duncan	4,600	4,600
Tonkawa-Garber-Thomas	6,450	6,450
Fish	3,275	3,250
Konawa	2,000	1,990
Gray	1,050	2,115
Graham	3,725	3,725
Holdenville	2,750	2,875
Wewoka	4,200	4,200
Yale-Jennings	5,000	5,000
Other pools	58,900	61,425
Total	420,775	451,205

Osage County

The Empire Oil & Refining Co.'s wildcat test in NE SE NE Section 3-25-3, Osage County, which was drilled to 3,824 feet, total depth, and then plugged back and shot at 3,240-50 feet, and again at 2,824-2,925 feet, was finally called a completion. It pumped 50 bbls. of oil and 25 bbls. of water in 24 hours. It was dry in the Wilcox and Hominy sands.

In the South Burbank Field, Carter Oil Co. and Peters Petroleum Corp.'s No. 2 Cook, NE cor. Section 9-25-6, flowed 1,040 bbls. in 24 hours in a potential test and was completed. It had Burbank sand at 2,686-2,728 feet.

First reports on new operations included F. O. Akin's No. 1, SW cor. NE Section 18-26-12, a location; Sinclair Prairie Oil Co. and Peters Petroleum Corp.'s No. 8, SE NW NE Section 24-24-7, a machine; J. R. Higgins and others' No. 15, SW NE SW SE Section 25-23-8, a location; Sinclair Prairie Oil Co. and Norbla Oil & Gas Corp.'s No. 1, SW SE NW Section 4-22-9, location; Devonian Oil Co.'s No. 4, NW SE SE Section 30-21-10, location; Norbla Oil & Gas Corp. and Sinclair Prairie Oil Co.'s No. 1, NW cor. SW Section 27-20-10.

Kay County

Wentz Oil Corp.'s No. 1-A Massetter, a twin, C SE SW Section 5-28-1, Kay County, was completed in Wilcox sand at 3,345-82 feet. It is a 78-bbl. pumper.

Noble County

Stanolind Oil & Gas Co.'s No. 2 Voss, NW NE SE Section 28-22-2w, in the new Polo Pool in Noble County, found the top of the Wilcox sand at 4,808 feet; pay at 4,825-30 feet, from which it flowed 504 bbls. in 24 hours; green shale at 4,850 feet and was drilling at 4,857 feet. There are seven wells drilling in the pool.

Pawnee County

Roy Dean and others were drilling at 850 feet in No. 1-A Lot 1, NE NW NW Section 31-21-9, southern Pawnee County.

Creek County

Completions in Creek County, which, notwithstanding it is one of the oldest producing areas in the State, is yet a busy field in scattered townships, registered the following completions, with their initial daily production, in the past week in review:

Texas Co.'s No. 5 Jackson, SW cor. NW Section 25-19-8, Red Fork sand at 2,350-70 feet, shot with 80 quarts, swabbed 12 bbls.

Fred Gray's No. 1 Wamble, NE NW SE Section 36-19-8, Bartlesville sand at 2,520-90 feet, hole full of water, abandoned.

Johnson Oil & Refining Co.'s No. 1 Scott, NW NE NW Section 32-19-9, Wilcox sand at 2,993 feet, total depth 3,023 feet, hole full of water, abandoned.

Samples & Mann's No. 1 Rentie, NE SW SE Section 32-19-9, Wilcox sand at 2,946-49 feet, 9,333,000 feet of gas.

L. B. Jackson's No. 10 Willis, CNL SW NW Section 26-18-8, Layton sand at 1,342-86 feet, shot with 120 quarts, 15 bbls.

C. W. Titus' No. 5 Casey, NE SE SW Section 3-17-8, Layton sand at 1,320-55 feet, shot with 120 quarts, 125 bbls.

Kiyoco Oil Co.'s No. 9 Hill, CEL SE SW Section 36-17-9, Layton sand at 1,133-37 feet, small show of oil, abandoned.

Sheridan Oil Co.'s No. 1 Adams, CEL SW NW Section 24-16-11, drilled to Siliceous lime at 2,985-91 feet, total depth 3,039 feet where it got salt water, plugged back to 2,388 feet where it had a 3,000,000-foot gas production at 2,268-2,300 feet and 2,348-88 feet, completed.

Bryan Petroleum Co.'s No. 3 Wilson (east 40 acres), SW NE NE Section 21-15-8, Bartlesville sand at 2,888-96 feet, shot with 20 quarts, 60 bbls.

New work first reported in Creek County included R. L. Hallifield and others' No. 1-A Peter, NE SE SW NW Section 6-18-7, a location; Bay State Oil Co.'s No. 4 Tiger, SE NW SW Section 3-17-18, a location; Doke & Hughes' No. 5 Watson, SW NW NW Section 1017-8, a location; Freeland and others' No. 1 Scruggs, C NE SW Section 16-17-8, rigging up.

Tulsa and Wagoner Counties

Dallas Greiger spudded No. 1 Asbury, NE N WNW Section 36-19-15, Wagoner County.

Keener Oil & Gas Co.'s No. 1 Morrison, SE cor. NE Section 34-18-13, Jenks district, Tulsa County, was dry and abandoned in Siliceous lime at 2,590-95 feet.

C. W. Mechlin completed his No. 1 Riverbed, SE NE SW NW Section 13-17-14, Tulsa County, which was reported last week as a 10,000,000-foot gas well at 1,726-27 feet.

R. O. Neal Gasoline Co.'s No. 1 Lewis, SE NE NW Section 36-17-14, was drilled into Siliceous lime at 1,870-85 feet, finding only water, and it was abandoned.

Crews & Armstrong have a 15-bbl. completion in No. 4 Muskogee, C NE NE Section 8-16-14. It was an old well deepened to 1,658-72 feet.

Okmulgee and Muskogee Counties

Ford & McDougal abandoned No. 1-A Brown (a twin), NE SW SE NW Section 27-15-13, Okmulgee County, at 860 feet.

Colton & Phillips Petroleum Co. completed No. 2-A Corbray, SE NE SE Section 17-14-12, a 25-bbl. well, in Wilcox sand at 2,742-49 feet.

F. C. Cusack's No. 3 Derrisaw, NE SE SE Section 30-12-12, is a 3-bbl. completion at 1,197-1,229 feet.

Rounsville and others' No. 6 Derisaw, SE NE SE Section 30-12-12, is a 3-bbls. pumper at 1,205-38 feet.

Superior Oil Co. spudded No. 1-A McIntosh, NW NE NW Section 17-15-12, a Wilcox sand test. Ford & McDougal spudded No. 2 Brown, SE NE NE SW Section 27-15-13, Okmulgee County. D. M. Logan's No. 1 Clarkson, NW SE NW Section 32-15-13, an old well deepened, was testing sand at 2,069-85 feet in which there was a 30-bbl. showing. Mack Drilling Co.'s No. 1 Simmons, SE NE NW Section 3-15-15, Muskogee County, was drilling at 1,085 feet. H. J. Metzgar & Dodson were drilling at 300 feet in No. 2 Daniel, a twin, SW SE SW Section 8-15-17, Muskogee County. D. Titley was drilling at 1,310 feet in No. 1-A Smith, NW SE SE Section 3-14-15, Muskogee County. E. J. Lambert was drilling at 750 feet in No. 1-A Dunn, CWL NE NW Section 21-13-14. Cole & Vierson and others' No. 1-A Douglas, a twin, SW cor. NE Section 22-12-13, was drilling at 800 feet. W. C. McAdoo and others made a location for No. 1 Broadnox, NE SW NW Section 31-12-14.

Lincoln County

Sinclair Prairie Oil Co. made a location for No. 1 Hoyt, C NW SW NE Section 5-14-3, a wildcat in the West Chandler area in Lincoln County.

Magnolia Petroleum Co. completed No. 5 Benedict, SW SW NW Section 7-14-4, Chandler Pool, it flowed 1,020 bbls. in Lincoln County.

Magnolia Petroleum Co. completed No. 5 Benedict, SW SW NW Section 7-14-4, Chandler Pool, it flowed 1,020 bbls. in 24 hours from Wilcox sand at 5,083-95 feet.

Wildcat Operations in Oklahoma

Week Ending October 6

NORTHERN OKLAHOMA

ALFALFA COUNTY

Acre et al's No. 1 Acre, C SW NE Sec. 14-24-11w.
T.D. 6,460 ft.; lost tools and S.D.

BECKHAM COUNTY

Fred Coogan et al's No. 1 Shel.on, SW cor. Sec. 32-10-25w.
Material on ground.

Price and Watchorn O. & G. Co.'s No. 1 Hoard, NE SW Sec. 17-8-26w.
S.D. at 2,312 ft.

CADDO COUNTY

H. W. Lee et al's No. 1 Stacey Ferrell, SW NE NE Sec. 3-6-13w; (2,000-ft. test).
Drlg. 356 ft.

Denver Prod. & Ref. Co.'s No. 1 Noe, NW SW SW Sec. 34-10-10w.
T.D. 11,230 ft.; fishing for drill pipe.

CLEVELAND COUNTY

Anderson & Kerr et al's No. 1 Wilson, NW SE Sec. 27-10-1e.
Drlg. at 6,080 ft., in dolomite.

Mid-Continent Pet. Corp. et al's No. 1 Collett, C E½ NE SW Sec. 35-10-1w.
First Oolitic at 5,148 ft; second Oolitic at 5,286 ft.; set 9-in. csg. 5,256 ft.; drlg. 5,290 ft.

COAL COUNTY

Moore & Deaner's No. 1 Edward, NW NE SE Sec. 27-2-8.
Base of Hunton 3,506 ft.; drlg. 3,527 ft.

J. D. Petty Oil Co.'s No. 1 McMillian, SW NW NE Sec. 16-1s-8e.
Drlg. 292 ft.

J. D. Petty Oil Co.'s No. 1 McMillan, SW NW NE Sec. 16-1s-8e.
S.D. 300 ft.

GARFIELD COUNTY

Ross Cummings et al's No. 1 Gage, SE NW Sec. 27-22-3w.
Spudded and S.D.

GARVIN COUNTY

William H. Atkinson et al's No. 1 Pharoah, NW cor. Sec. 15-3-2w.
Drlg. 2,085 ft.

GRANT COUNTY

Helmerich & Payne's No. 1 Crouse, C NE SW Sec. 29-25-6w.
Fishing for drill pipe 4,256 ft.

Sultan Oil Corp.'s No. 1 Patton, SW SE Sec. 19-29-3w.
Drlg. 4,501 ft., in lime.

HARPER COUNTY

Sinclair Prairie Oil Co.'s No. 1 Neff, NW SE Sec. 21-26-24w.
T.D. 5,470 ft.; running 9-in. csg.

HUGHES COUNTY

J. B. Hill's No. 1-A Perkins, C W½ SW SW Sec. 7-5-9.
Dry and abnd. 1,075 ft.

Turner e. al's No. 1 Williams, SW cor. Sec. 35-7-10.
Rig.

KINGFISHER COUNTY

Jadeka Dev. Co.'s No. 1 Frakes, C SW NE SW Sec. 16-15-6w.
Drlg. 7,605 ft.

LEFLORE COUNTY

East Okla. O. & G. Co.'s No. 1 Metcalf, SW cor. Sec. 3-4-26.
T.D. 2,040 ft.; hole caved; S.D.

Murdock et al's No. 1 fee, SW NE SW Sec. 15-5-25e.
T.D. 2,425 ft.; S.D.

LINCOLN COUNTY

Mid-Continental Oil Co.'s No. 1 Bolby, C SE SW Sec. 27-12-2.
Drlg. 4,600 ft.

R. L. Kemp and Comail Oil Co.'s No. 1 Dooley, NE SW Sec. 20-17-4.
Rig.

Derrickson and Reserve Pet. Co.'s No. 1 Law, SE SW NE Sec. 25-14-3.
Digging pits.

M. Murray and Ralph Day's No. 1 Rittenhouse, NW NW NE Sec. 26-14-6.
Set 15-in. pipe at 60 ft.

Sinclair Prairie Oil Co.'s No. 1 Hoyt, NW SW NE Sec. 5-14-3.
Location.

LOGAN COUNTY

W. N. Anthony's No. 1 Fruin, SE SW Sec. 4-16-1.
Wilcox 5,265-85 ft.; P.B. to 5,181 ft.; will shoot Misener sand.

Gypsy Oil Co. and Sinclair Prairie O. & G. Co.'s No. 1 Manning, C NW NW Sec. 3-17-4w.
Viola at 5,030 ft.; drlg. 5,162 ft.

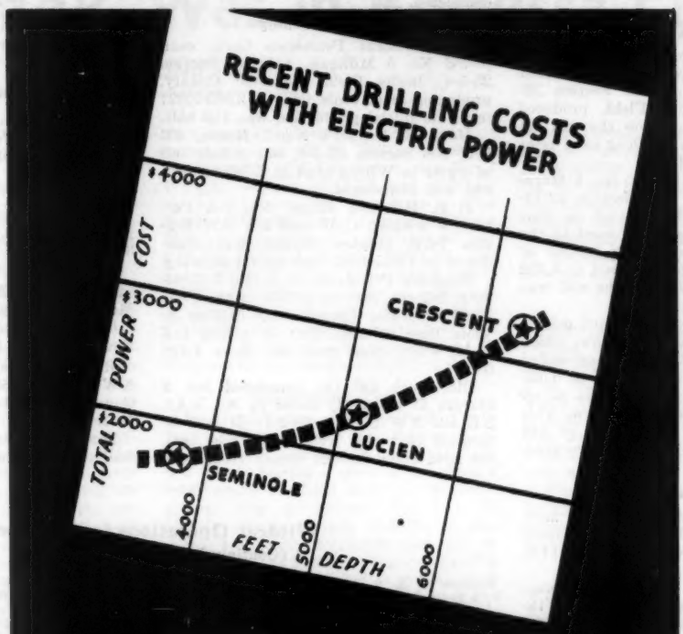
OKLAHOMA COUNTY

Springrose Drlg. Co.'s No. 1 Edwards, C SE Sec. 19-11-1.
T.D. 6,540 ft.; 400 ft. drill pipe in hole; S.D.

OSAGE COUNTY

Peters Pet. Co. and Norbla Oil Co.'s No. 1, SW cor. Sec. 15-25-5.
Set 8-in. csg. 2,345 ft.

(Continued on Next Page)



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Commercial Department

OKLAHOMA CITY OKLAHOMA

Slick-Urschel, Inc., and others' No. 6 Kentzleman, NE NW SW Section 7-14-4, was completed. It was a 425-bbl. initial producer from Wilcox sand at 5,073-94 feet. Same operators have cellar dug for No. 7 Kentzleman, C NW NW SW Section 7-14-4.

Magnolia Petroleum Co. has made a location for No. 5 Wagner, SW NW NE Section 18-4-4.

Oklahoma County

Phillips Petroleum Co.'s No. 3 Holstein, 984 feet from south line and 1,151 feet from west line of SE Section 22-11-3w, Oklahoma City Field, produced 1,865 bbls. in 24 hours on the gas lift and was then shut in. Wilcox sand is at 6,460-75 feet, total depth.

Ray Stephens and others' No. 1 Maradun, CWL SW SE NE Section 22-11-3w, swabbed 215 bbls. of oil in four hours from green shale and sand in the Wilcox series. Wilcox was topped at 6,443 feet, green shale and sand at 6,452 feet, total depth 6,627 feet. The well was shut in.

Nebo Oil Co.'s No. 3 Little and others, NE SE NW NE Section 27-11-3w, which had Wilcox sand at 6,450 feet and drilled to 6,610 feet, was plugged back to 6,525 feet and shot. It pumped 50 bbls. of oil in 24 hours and was shut down. This well made an initial production of 140 bbls. last July and has never been completed.

Greater Seminole Field

Carter Oil Co. and others were moving in rotary to start No. 1 Twinah, C-28, C S half SW NW Section 35-11-6, Seminole County.

Carter Oil Co. and others' No. 1 Douglas, C-32, C E half SE NW Section 18-10-6, was completed. It made 700 bbls. on a potential test from Wilcox sand at 4,579-90 feet, which had been acidized.

Carter Oil Co. and others were building rig for No. 1 Hollis, C-32, C W half NE SW Section 18-10-6.

Atlantic Oil Producing Co. and Phillips Petroleum Co.'s No. 2 Dobbs, NW cor. Section 18-9-5, Earlsboro district, Pottawatomie County, was acidized in Hunton lime at 4,124-46 feet and swabbed and flowed 365 bbls. in 24 hours. Completed.

Carter Oil Co.'s No. 1 J. Magruder, C E half SW SW Section 2-9-6, Seminole City district, was completed in Hunton lime at 3,967-4,013 feet which had been acidized. It produced 256 bbls. in 24 hours.

Mid-Continent Petroleum Corp.'s No. 1-A Johnson, SW SW NW Section 13-9-6, had Hunton lime at 4,027-53 feet. It was acidized and flowed 1,245 bbls. in 24 hours and 815 bbls. the second day but was not yet completed.

Morgan Petroleum Co.'s No. 1 Robertson, NE NE SE Section 30-8-4, Pottawatomie County, swabbed 120 bbls. in 24 hours from Hunton lime at 4,433-50 feet, total depth.

Smith & Scott's No. 1 Goodin, SW NE NW Section 3-7-4, St. Louis area, Pottawatomie County, swabbed 12 bbls. per hour after an acid treatment. Hunton lime lay at 3,941-62 feet, total depth.

Keyokla Oil Co.'s No. 2 McGee, had Hunton lime at 3,794 feet and Sylvan at 4,055 feet, total depth 4,058 feet. It was acidized and swabbed 20 bbls. per hour.

Earl Halliburton completed No. 4 Pierson, SW SE NE Section 9-7-4, a 375-bbl. initial producer recorded last week.

Manahan Oil Co. completed No. 6 Chapman, SE NE SW Section 10-7-8, Hughes County, flowed 12 bbls. of oil and 1,500,000 feet of gas from Booch sand at 2,888-2,950 feet, and was completed.

Mid-Continent Petroleum Corp.'s No. 10 Factor, CNL NW SE Section 15-7-8, is a completion in Calvin sand at 1,182-85 feet. It started at 40 bbls. of oil and 30 bbls. of water per day.

Burke Greis Oil Co. and others' No. 2 Louisa flowed 532 bbls. in 24 hours at 3,074 feet and 795 bbls. in 24 hours at 3,078 feet. Wapanucka lime was topped at 3,017 feet.

Magnolia Petroleum Co.'s No. 2 Reid, SE NE SE SE Section 30-7-8, flowed 140 bbls. in 24 hours. Eight-inch pipe was set at 3,018 feet in Wapanucka lime, total depth 3,045 feet in sandy lime and shale.

Champlin Refining Co.'s No. 1 Wolf, NW cor. Section 32-7-8, had Wapanucka lime at 3,037-92 feet and it flowed 404 bbls. naturally in 24 hours and was completed.

Pontotoc County

Mid-Continent Petroleum Corp. completed No. 3 Milligan, NE cor. Section 25-5-4, Beebe Field, Pontotoc County, producing from Viola lime at 2,535-2,627 feet. Its initial production was 110 bbls.

Moore & Deaner's No. 1 Burke, SE NW NE Section 25-5-4, was a hole full of water in Wilcox sand at 2,885-88 feet, and was abandoned.

J. B. Hill and others' No. 1-A Perkins, a wildcat, C W half SW SW Section 7-5-9, Hughes County, was abandoned at 1,075 feet, with no oil showing.

Magnolia Petroleum Co.'s No. 1 Craddock, SE cor. Section 24-2-6, in the Fitts Field, Pontotoc County, was drilling in Viola lime at 4,463 feet in a hole full of oil which came from pay above 4,416 feet.

Blackstock Oil Co. completed No. 2 Hardin D (formerly listed as No. 1-A), NE SE NW Section 30-2-7. It will be recalled that this well flowed 540 bbls. the first hour through casing from sand at 4,442-80 feet and later 919 bbls. in five hours through 2½-inch tubing against a 500-pound back pressure.

Gillette & Kroeger have a rig on the ground for No. 1 Robbins, NE NE SE Section 31-1-4, a wildcat. Blackstock and others have rig on the ground for No. 2 Craddock, SW NE SE Section 25-2-6.

Grady County

W. S. Critchlow is rigging up rotary for No. 6 Adair, NW SW NW Section 27-3-5w, Grady County.

In Southern Counties

Farlyn Oil Co.'s No. 23 Seay, 585 feet north and 940 feet west of SE cor. Section 3-7s-5w, Jefferson County, is a 32-bbl. completion from sand at 1,063-79 feet.

Lang and others have made a location for No. 13 Seay, SW SE SE SE Section 3-7s-5w.

L. F. Wham and others' No. 2 Newsome, SE SW NE NE Section 25-7s-5, Marshall County, was completed. It made 2 bbls. of oil and 25 bbls. of water from sand at 459-70 feet.

R. A. Godfrey's No. 3 Eppler, NE NW NE NE Section 36-7s-5, Marshall County, is a 21-bbl. completion at 507-19 feet.

Hudson & Poland's wildcat test, No. 1 Sullivan, NE cor. SE Section 5-5s-1w, Carter County, was abandoned as dry at 4,511 feet.

Heenan & Coe and others were moving in tools for No. 1 Hefner, SE NE SW, Section 13-3s-7w, Stephens County.

California P. & O. Co. abandoned Nos. 1 and 2 Sitton, No. 1, NE SE SW Section 12-3s-6w, Stephens County, in sand at 646-68 feet, where it had a gas showing, and No. 2, CWL NE SE SW Section 12, in sand at 432-56 feet, where it had a small showing of gas.

Winkler & McQueen were drilling at 912 feet in No. 1-A Bristow, SE SW SW Section 18-2s-7w. George Pace and others had rig up for No. 15 Watkins, SE NE SW SE Section 21-2s-7w, both in Stephens County.

C. P. Williams has started drilling No. 1 Singletery, SE SW NW Section 25-2s-3w, Carter County, a wildcat.

L. Sykes was rigging up rotary for No. 1-B Dolan, SW NW NW Section 15-1s-8w, Stephens County.

L. Sykes was rigging up to pump No. 4 Mulkey, CEL NE Section 16-1s-8w, which looked like a 60-bbl. well in sand at 2,099-2,100 feet, total depth.

Braden and others' No. 18 Green, NE SW SE Section 27-1s-5w, Stephens County, had sand at 915-27 feet and is a 6-bbl. completion.

Wildcat Operations in Oklahoma

(Continued from Preceding Page)

Empire O. & R. Co.'s No. 1, SE NE Sec. 3-2S-3.
Wilcox sand failure at 3,524 ft.; T.D.; P.B.; shot Layton sand 2,570-3,640 ft.; pumped 75 bbls. oil, 50 bbls. wtr.; completed.
Norbia Oil Co. et al's No. 1, SE NW Sec. 19-2S-7.
T.D. 2,176 ft.; fishing.

PITTSBURG COUNTY

Exchange Drlg. Co. et al's No. 1 Chunn, SE NW Sec. 29-4-14.
T.D. 350 ft.; waiting for csg.
P. H. Gray et al's No. 1 Lee, NW SE Sec. 12-5-13.
Drlg. 130 ft.
W. E. Hailey's No. 1 Drew, NW SW Sec. 21-3-14.
S.D. 190 ft.

PONTOTOC COUNTY

Charles E. Carter et al's No. 1 Wood, NW SW SE Sec. 5-4-3.
Spudded and S.D.
S. D. Denton et al's No. 1 Gray, NW SE Sec. 9-4-3.
Cellar and pits.
Benedum & Trees' No. 1 James, SE NW SW Sec. 10-5-3.
Drlg. 3,535 ft.
E. M. Blanchard's No. 1 Crabtree, NE SE NE Sec. 27-2-6.
S.D. 2,920 ft.
Boyle et al's No. 1 Newbern, SW NE Sec. 31-5-4.
P.B. to 2,080 ft.; recementing.
Jarrett Pet. Co.'s No. 1 Johnson, SE NW Sec. 28-4-4.
Cored 1,620-28 ft. in Hunton.
Dandridge et al's No. 1 Stafford, NW cor. Sec. 5-1-6e.
T.D. 680 ft.; S.D.
Gillette & Kroeger's No. 1 Robbins, NE SE Sec. 31-1-4.
Rig on ground.
Gillette & Kroeger's No. 1 Duver, NW SE Sec. 36-1n-6e.
Drlg. 675 ft. (corrected).
Riddle et al's No. 1 Barnes, SE NW SE Sec. 21-5-4.
S.D. 2,922 ft.
J. D. Sledge and Jack Lynch's No. 1-A (twin) Thompson, SW NE SW Sec. 1-1n-7e.
T.D. 3,786 ft.; drill pipe stuck.
Southern Oil Corp.'s No. 1 Ladd, C NW NW Sec. 27-3-7.
Drlg. 280 ft.

POTTAWATOMIE COUNTY

W. D. Grisso et al's No. 1-A Kenyon, C NE SE Sec. 3-8-4.
Hunton 4,050 ft.; 6-in. csg. at 4,048 ft.
Verser & Clay et al's No. 1 Thomas, NE SE NW Sec. 1-4-6.
12-in. pipe 51 ft.; S.D. 300 ft.

SEMINOLE COUNTY

Harris and Haun's No. 1 Harjo, NE SE NW Sec. 11-6-8 (C.W.P.B.).
Old T.D. 2,935 ft.; ripped csg. 2,100-12 ft.; flowed 101 bbls. in 24 hrs.; sand 2,155 ft.; T.D. 2,175 ft.; cementing off water.
Moran et al's No. 1 Brinlee, SW NE Sec. 27-6-5.
Drlg. 2,485 ft.
Mudge Oil Co.'s No. 1 Whitney, SE NW Sec. 9-6-7.
Drlg. 1,698 ft.

WASHITA COUNTY

Anadarko Basin Oil Co.'s No. 1 Wolf, NE SW Sec. 23-9-17w.
Rigged up and S.D.
Okla.-Midwestern Oil Co.'s No. 1 Dock, SW cor. Sec. 21-8-18w.
T.D. 2,430 ft.; lost tools in hole; rig rebuilt; S.D.

SOUTHERN OKLAHOMA

ATOKA COUNTY

Brookshire et al's No. 1 Rowland, NW NE NE Sec. 18-3s-10e.
U.R. 5-in. pipe to 2,535 ft.; T.D. 2,709 ft.
J. D. Boukan's No. 1 Howard, NW SW NW Sec. 20-2s-10e.
S.D. 1,135 ft.; machine moved out.
L. A. Fitts' No. 1 Blankenship, NE cor. NW Sec. 19-3s-10e.
T.D. 651 ft.; S.D.
T. C. Ramler et al's No. 1 Roberts, SW SE SW Sec. 6-2s-12e.
Drlg. 1,004 ft.

CARTER COUNTY

Daphfine Oil Co.'s No. 1 Hooks, SE NW NW SE Sec. 5-1s-3w.
S.D. 1,955 ft.
Hudson & Poland's No. 1 Sullivan, NE SE Sec. 5-5s-1w.
T.D. 4,511 ft.; P.B.; set 8-in. csg. 3,920 ft.; tested wtr.; pulling pipe to abd.

CHOCTAW COUNTY

J. V. Scrivener et al's No. 1 Swink, C NE SE Sec. 29-6s-20e.
S.D. 810 ft.

COMANCHE COUNTY

F. F. Stevens' No. 1 Green, SE SW Sec. 2-1-13w.
T.D. 1,210 ft.; lost bit; S.D.
Heiden & Taylor's No. 1 Crutcher, C NE Sec. 11-1n-12w.
T.D. 863 ft.; fishing for tools.

GARVIN COUNTY

National Prod. Co.'s No. 1 Littrell, NE cor. Sec. 31-2n-3w.
S.D. 351 ft.

JACKSON COUNTY

Gypsy Oil Co.'s No. 1 Stokes, SE NW SW Sec. 11-1-20w.
Lime 1,709-11 ft.; T.D. 1,723 ft.; S.D.
Gypsy Oil Co.'s No. 1-A (Twin) Kelly, NE cor. Sec. 10-1n-20w.
Shot with 10 qts. at 1,150-70 ft.; bailing muck.
Ben Russell et al's No. 1 Unknown, NW SE Sec. 20-1-22w.
S.D. 3,734 ft.

JEFFERSON COUNTY

Geo. Pace et al's No. 1 Jack, NE NW NW Sec. 19-4s-4w.
Drlg. 2,963 ft.

JOHNSTON COUNTY

Gled Oil Co. et al's No. 1 Ferguson, SW SE NE Sec. 36-3s-8.
Rigging up machine.
Okla. Oil Corp.'s No. 1 Tubbi, SW NE SE Sec. 11-2s-8.
Sulphur wtr. at 3,765-76 ft.

MARSHALL COUNTY

Paul Robb's No. 1 Vittetoe, C NE SE Sec. 11-5s-4e.
T.D. 4,937 ft.; S.D. for water.

MURRAY COUNTY

T. E. Revell et al's No. 1 Wolfe, NE cor. Sec. 18-1-2.
Sand 2,658-70 ft.; show of oil; T.D. 2,710 ft.; S.D.

STEPHENS COUNTY

Wm. Angle's No. 1 Johnson, NE cor. SE Sec. 17-1n-3w.
Drlg. 1,140 ft., in shale.
Carter Oil Co.'s No. 1 McCasland, C NW NW SW Sec. 32-1s-4w.
Drlg. 4,407 ft.
Finley et al's No. 1 Woolsey, NW SE Sec. 10-3s-6w.
Sand 325-27 ft.; show gas; S.D. 440 ft.
J. W. Madison's No. 1 Tussey, SW SE NW Sec. 24-1n-4w.
Rig down, drill pipe in hole; S.D. 3,230 ft.
J. D. Petty Oil Co.'s No. 1 McMillan, SW NW NE Sec. 16-1s-5w.
Drlg. 508 ft.

MAP OF TRINITY TREND

HOUSTON, Tex., Oct. 8.—The interest which has been directed toward the exploration for additional fields along the so-called Trinity trend since the opening of the new Kittrell Field in southern Houston County, has occasioned the compilation by W. W. Zingery, Houston, Tex., of a strip map embracing Houston, Leon, Madison, Grimes, Walker, Trinity, San Jacinto, Polk, Angelina, Tyler, Jasper, San Augustine, Newton and Sabine Counties and portions of adjoining counties. The district, or trend, covered by the map represents an almost virgin territory between the Conroe trend district on the South and the East and East Central district on the north. The Carrizo sand, from which the Kittrell Field is producing, in itself is somewhat virgin in possibilities as it has been productive in only three other places. The map, which Mr. Zingery has just compiled, indicates the various contact lines through the trend and contains a record of the wildcats drilled.

HARRY AGNEW DIES

Harry (Harve) Agnew, 55 years old, veteran drilling contractor in the Mid-Continent area, died last week in a Tulsa hospital. He early became associated with the late C. H. Hubbard, drilling contractor, and the two brought in some of the first wells in the Wynona, Burbank, Webb City, Cromwell and Seminole Fields.

L. E. COLLUM DIES

L. E. Collum, pioneer Long Beach, Calif., operator and vice president of the Dabney Johnston Oil Co. for several years, died in Los Angeles during the past week.

Statement of the Ownership, Management, Etc., of
THE OIL AND GAS JOURNAL
October 1, 1934

(This statement is published in compliance with the Act of August 24, 1912.)
Published weekly (Thursday) at Tulsa, Okla.
Publisher: The Petroleum Publishing Co., Tulsa, Okla.
General Manager: John M. Egan, Tulsa, Okla.
Editor: James McIntyre, Tulsa, Okla.
Managing Editor: Andrew M. Rowley, Tulsa, Okla.
Stockholders holding 1 per cent or more of total amount of stock: Helen B. Lauinger, Tulsa, Okla.; Edward R. Boyle, Oil City, Pa.; Estate of Margaret D. Boyle, Oil City, Pa.; Estate of Jennie B. Egan, Oil City, Pa.
Known bondholders, mortgagees and other security holders holding 1 per cent or more of the total amount of bonds, mortgages or other securities: None.

JOHN M. EGAN,
General Manager.

Sworn to and subscribed before me this 2nd day of October, 1934.

H. R. BARNETT,
Notary Public.
My commission expires October 3, 1937.

Ten New Locations Staked in North Louisiana; Best Well of Week Was in Rodessa Field

By J. R. CRUMPTON
Staff Correspondent, Louisiana-Arkansas

SHREVEPORT, La., Oct. 8.—The North Louisiana district reported all of the drilling results in this division during the past week with eight completions, three of which were gas wells, one oil well and four dry holes. In addition, 10 new operations were staked in this distract, including three wildcats, the remaining seven being in proven fields.

The best well of the week was Arkansas-Louisiana Pipe Line Co.'s No. 1 R. L. Parker, Section 26-23-16, in the Rodessa Field, Caddo Parish. The initial open flow gauged 49,364,000 feet of highly saturated gas from 5,655 feet. The rock pressure gauged 2,135 pounds. The well is about a quarter mile northeast of the field proper, but within the proven lines as this company recently extended the field about 1½ miles in that direction. United Gas Public Service Co. has recently set 7-inch casing at 5,440 feet on its No. 1 Ned Christian, Section 23-23-16, in the Rodessa Field and is coring for the Oolitic lime at 5,543 feet. This company's last producer in this area was on the southwestern flank of the field in Cass County, East Texas.

In the shallow sand of the Blanchard Field, Caddo Parish, W. T. Boyd's No. 1 M. R. Mitchell, Section 6-18-16, is estimated as a 2,000,000-foot gasser with 400 pounds rock pressure from 975 feet. The second producer reported from this area, Texas Co.'s No. 3 Noel fee, Section 4-18-16, has an initial open flow of 1,500,000 feet of gas with 345 pounds rock pressure from 922 feet. Both wells set 2½-inch tubing with packer after setting one joint of 8-inch surface casing. Caddo Parish, the oldest producing area in this division, furnished the only oil well reported during the week. J. T. Reese's No. 1-K Murray estate, Section 28-21-15, is pumping and flowing 50 bbls. daily from 1,652 feet.

Blanchard Field

The Blanchard Field listed two of the four dry holes from the North Louisiana district. Louana Oil & Gas Co.'s No. 3 W. F. Hammock, Section 32-19-16, encountered salt water and was abandoned at 948 feet, and A. L. Pollard's No. 1 P. A. Sharpe, Section 10-18-16, was abandoned as dry at 954 feet. A shallow test west of the town of Benton in Bossier Parish, F. M. Crow's No. 1 Biedenharn, Section 23-21-14, tested a spray of gas several months ago at 1,045 feet but failed to make a commercial well and was abandoned at that depth. Efforts at getting deeper pay in the vicinity of the shallow chalk rock field at Converse, Sabine Parish, met with another failure. Calatex Oil & Gas Co.'s No. 1 Whiting Corp., Section 4-9-13, completed as a 10-bbl. pumper last year from 1,990 feet, was deepened to 3,310 feet and abandoned as dry. A drill stem test from 3,083-3,171 feet developed a show of gas but failed to make a commercial well. One derrick, originally erected on a 5,200-acre block in Natchitoches Parish, Matthew Foremen's No. 1 Poissett, Section 9-10-8w, was abandoned and the leases allowed to expire.

Only three of the 10 new locations made in this district were rank wildcats. In Bienville Parish, T. L. James is rigging up his No. 1 Harrison, Section 2-16-6, the second test to start recently in that area. A new test in DeSoto Parish, W. T. Coleman's No. 1 Rambin estate, Section 13-12-12, is rigging up, and in East Carroll Parish in the northeastern part of the State, Holcomb and Thomason have made location for No. 1 Milliken in Section 22-23-12e. The second important wildcat in Bienville Parish, Benedum & Trees' No. 1 J. W. Sprawls, Section 17-15-6, topped the Nacatoch at 1,955 feet and is drilling at 2,055 feet. The test is being drilled primarily to test the Blossom sand, but will be carried to 5,000 feet to take in the Woodbine and lower formations if the Blossom fails to pay off.

Sligo Area

Triangle Drilling Co.'s No. 2 Skannell Unit, Section 14-17-12, in the Sligo area of Bossier Parish, on drill stem test, developed a hole full of salt water in 22 minutes from 3,060-3,286 feet. The hole will be deepened to the top of the Trinity which should be contacted around the 4,200-foot level. The Sligo Field produces gas from the Nacatoch around the 900-foot level to the Oolitic lime of the Glen Rose in the upper Trinity. Several wells have also made considerable oil, and the present test is being drilled for the primary purpose of making an oil well. United Gas Public Service Co. owns the gas rights in the Sligo area, and has set 9⅝-inch casing at 2,719 feet in its No. 1 Herold Unit in Section 13-17-12. DeSoto Parish continues to keep the lead in wildcatting and should have some results to show during the next few weeks from its numerous tests. W. K. Williams has set 7-inch casing at 2,580 feet on his No. 1 Wemple, Section 15-12-11, and will test during the next few days from a total depth of 2,660 feet. Dempsey-Manziel have recently resumed operations on No. 1 T. D. Thigpen, Section 33-13-13, and are coring at 1,650 feet. Bayou-Pierre Oil Co. is drilling in shale at 1,700 feet on No. 1 B. Y. Wemple, Section 14-12-11, and the Century Oil & Drilling Co.'s No. 1 J. M. Morton, Section 27-11-14, is temporarily shut down at 1,550 feet.

Natchitoches Parish

In Natchitoches Parish, Jack Lent's No. 1 Brown Lumber Co., Section 27-9-13, set 6-inch casing with packer at 2,471 feet and is testing a show of gas from a total depth of 2,474 feet. In the same parish, Roy A. Raines' No. 1 I. D. Raines estate, Section 28-9-10, is shut down for water at 2,606 feet. C. M. Cope's No. 1 Thomas, Section 34-13-8, Red River Parish, failed to get 8¼-inch casing set with packer to test at 1,614 feet, the testing being delayed because of a fishing job for drill bit and collar. The Sabine Parish fields continued through a lull of comparative inactivity since a sharp decline in drilling in that area during the past three months. In Union Parish, Lawson and Leavell's No. 1 J. L. Gunter, Section 14-23-3w, topped the Arkadelphia at 2,043 feet and went out of the chalk at 2,554 feet. The test is drilling at 3,030 feet.

ARKANSAS

None of the wildcats in Arkansas developed anything of interest during the week. Seton Oil Co.'s No. 1 C. H. Murphy, Section 34-15-10, Bradley County, which has been reported checking high, is drilling below 3,200 feet after testing salt water from 2,606-16 feet. Another week should determine the status of several wildcats in widely separated areas in the Arkansas district. Tests in Miller, Lafayette, Hempstead and other counties should be either looking hot or condemned within a few days.

Daily Production

Estimated daily gross production all companies week ending October 5, 1934:

NORTH LOUISIANA	
Bellevue	450
Caddo, light	4,440
Caddo, heavy	1,550
Converse	1,850
Cotton Valley	500
De Soto and Red River	1,385
Elm Grove	420
Haynesville	3,750
Holly	180
Homer	2,710
Pleasant Hill	305
Sarepta-Carterville	625
Urania	3,180
Zwolle	2,710
Total	23,755

SOUTH ARKANSAS	
Champagnolle	1,075
El Dorado	3,405
Lisbon	355
Miller County	1,445
Nevada	855
Smackover, light	3,325
Smackover, heavy	19,185
Stephens	620
Urbana	2,375
Total	30,840

Wildcat Operations in Louisiana-Arkansas

(Rotary operations unless otherwise designated)

NORTH LOUISIANA

AVOYELLES PARISH

Bell Oil Co.'s No. 1 Woodley, 330 ft. S and W NE cor. NW Sec. 11-2n-5e.
Washing to bottom 1,700 ft.

BIENVILLE PARISH

Benedum & Trees' No. 1 J. W. Sprawls, 660 ft. S, 330 ft. W, NE cor. NW NE Sec. 17-15-6.
Set 12½-in. 392 ft.; drlg. 2,055 ft.

T. L. James' No. 1 Harrison, SW cor. NW NW Sec. 2-16-6.
Rigging up.

Saline Drlg. Co.'s No. 1 Pardee, Sec. 27-14-6.
Set 10-in. 142 ft.

BOSSIER PARISH

Bossier O. & G. Co.'s No. 1 Sherrill, 300 ft. S and W, NE cor. Sec. 13-9-12.
S.D.; W.O. 2,361 ft.

Howard & Baird's No. 1 Gold, 150 ft. S and E, NW cor. Sec. 36-20-13.
S.D. for water 1,126 ft.

McKinney & Stewart's No. 1 Nattin, 470 ft. W, 620 ft. S, NE cor. Sec. 22-22-14.
S.D. 2,973 ft.

Producers O. & G. Co.'s No. 1 Weiner, 660 ft. N and W, SE cor. Sec. 7-17-11.
Testing 3,984 ft.

Triangle Drlg. Co.'s No. 2 Skannell Unit, 990 ft. N, 660 ft. W, SE cor. Sec. 14-17-12.
Testing 3,286 ft.

United Gas Pub. Service Co.'s No. 1 Herold Unit, 50 ft. S and W, NE cor. SW SE Sec. 13-17-12.
Set 10-in. 2,719 ft.

CADDO PARISH

Ark.-La.-Tex. O. & G. Co.'s No. 1 Simon, 330 ft. N and E, SW cor. Sec. 15-20-15.
S.D. 2,010 ft.

W. T. Bell et al's No. 1 Bostick, 1,820 ft. E, 660 ft. N, SW cor. Sec. 12-22-16.
S.D. for water, 2,540 ft.

S. Bendor's No. 1 Starr, 150 ft. N, 195 ft. E, SW cor. SW Sec. 26-20-16.
W.O.S.R. 2,258 ft.

Burkett O. & G. Co.'s No. 1 Lindholm, 400 ft. S and E, NW cor. NE SE Sec. 15-17-14.
S.D. 1,946 ft., repairing rig.

Capitol O. & G. Co.'s No. 1 Noel Est., 300 ft. S and E, NW cor. NE Sec. 12-20-16.
S.D. 450 ft.

O. L. Hickman's No. 1 fee, 1,046 ft. S, 1,700 ft. E, NW cor. Sec. 36-17-15.
Rigging up.

A. D. King, tr.'s No. 1 Roach, 641 ft. E, 375 ft. N, SW cor. SE Sec. 4-14-16.
S.D. 2,128 ft.

H. E. Phillip et al's No. 1 Surrey, 330 ft. S and E, NW cor. NE NE Sec. 3-20-16.
Coring 915 ft.

J. T. Reese's No. 1 Murray Est., Sec. 28-21-15.
Comp. pumping 50 bbls. 1,652 ft.

Shreveport Oil Corp.'s No. 1 Muslow, 412 ft. N, 660 ft. E, SW cor. NW Sec. 4-20-15.
Set 7-in. 2,174 ft.

CALDWELL PARISH

Terrell & Price's No. 1 La. Central Lbr. Co., 300 ft. N, 300 ft. W, SE cor. NW NE Sec. 18-11-3e.
S.D. 3,485 ft.

CATAHOULA PARISH

T. R. Hincy's No. 1 La. Central Lbr. Co., Sec. 32-9-6e.
Drlg. 130 ft.

DE SOTO PARISH

L. H. Alderson's No. 1 Peek, SE cor. NW NE Sec. 25-11-13.
S.D. for wtr. 2,030 ft.

Bayou Pierre Oil Co.'s No. 1 B. Y. Wemple, C SE NE SW Sec. 14-12-11.
Drlg. 1,700 ft.

Century O. & Drlg. Co.'s No. 1 Morton, 300 ft. N and E SW cor. SE NE Sec. 27-11-14.
S.D. 1,550 ft.

Jack Clarke's No. 1 Moore, 330 ft. S and W NE cor. NW Sec. 1-13-15.
S.D. 1,675 ft.

Dempsey & Manziel's No. 1 Thigpen, 375 ft. S, 330 ft. W, NE cor. SW NE Sec. 33-13-13.
Coring 1,655 ft.

DeSoto Pet. Co.'s No. 1 B. Y. Wemple, C S½ SE NE SW Sec. 14-12-11.
S.D. 1,070 ft.

E. L. Foster's No. 1 Youngblood, Sec. 9-11-14.
O.W.D.D. from 1,502 ft.

Hester et al's No. 1 Alston, 330 ft. S and W of center of Sec. 11-11-16.
S.D. 3,100 ft.

George Le Grande's No. 1 Vance, 180 ft. N and W SE cor. SW Sec. 34-12-16.
Rigged up and S.D.

W. K. Williams' No. 1 Wemple, 600 ft. N, 330 ft. W, SE cor. Sec. 15-12-11.
Set 7-in. 2,660 ft.

LA SALLE PARISH

A. D. Hudson et al's No. 1 Urania, 600 ft. W, 150 ft. N, SE cor. NE SW Sec. 7-10-2e.
S.D. 1,503 ft.

F. A. Trichello's No. 1 Urania, Sec. 3-9-1e.
Rigging up.

MOREHOUSE PARISH

Southern Carbon Co.'s No. 65 fee, 2,030 ft. S, 600 ft. E NW cor. Sec. 14-20-4e.
Rigging up.

Zeiger & Bacon's No. 1 Crossett, 400 ft. N, 300 ft. W, SE cor. Sec. 41-23-6e.
T.A. 3,111 ft.

NATCHITOCHES PARISH

Clyde Crichton's No. 1 Friedman Est., 406 ft. N, 428 ft. E, SW cor. Sec. 52-7-6.
S.D. for wtr., 1,088 ft.

Jack Lent's No. 1 Brown Lbr. Co., 400 ft. S, 300 ft. E, NW cor. NE SW Sec. 27-9-13.
Set 6-in. with packer 2,471 ft.; bailing to test 2,479 ft.

Missouri Drlg. Co.'s No. 1 Brown Lbr. Co., 400 ft. N, 330 ft. W, SE cor. Sec. 5-10-10.
S.D. 1,023 ft.

Roy A. Raines et al's No. 1 Raines est., 330 ft. N and E, SW cor. Sec. 8-9-10.
S.D. for water 2,606 ft.

OUACHITA PARISH

United Public Service Co.'s No. 2 fee, 460 ft. S and W, NE cor. Sec. 26-19-3e.
Set 13-in. 164 ft.

RED RIVER PARISH

Louis L. Glass' No. 1 Dickson, 400 ft. S and W, NE cor. SE Sec. 32-12-8.
S.D. 1,030 ft.

(Continued on Page 83)

Petroleum Accountants Open Meetings in Tulsa

The opening meeting of the 1934-35 season of the Petroleum Accountants Society of the Mid-Continent area was held in the Mayo Hotel, Tulsa, with an unusually large and enthusiastic attendance. C. E. Buchner, of the Independent Petroleum Association of America, gave a very interesting address on the code and its development.

The terms of three directors expired at this meeting and nominations, election of directors, and subsequent election of officers took place. The retiring directors were L. D. Messner of Barnsdall Oil Co., D. B. Catterlin of Gypsy Oil Co., and L. P. Harrington of Pure Oil Co. ,who were replaced by V. W. Henry of Tide Water Oil Co., F. B. Branson of Gypsy Oil Co., and L. P. Harrington of Pure Oil Co. The directors elected as officers: President, M. H. Massey, Marathon Oil Co.; first vice president, F. B. Branson, Gypsy Oil Co.; second vice president, Roy E. Parr, Phillips Petroleum Co.; secretary-treasurer, F. J. Kelleher, Stanolind Oil & Gas Co. The retiring secretary-treasurer, L. S. Collins of Carter Oil Co., remains on the board of directors.

Some profitable research and discussion is contemplated in the ensuing meetings, which are to be held on the fourth Friday of each month.

Most Important Development in West Virginia Is New Work in Elk District, Kanawha County

By STAFF CORRESPONDENT

PITTSBURGH, Pa., Oct. 8. — There were 20 completions and 10 dry holes in the lower eastern fields during the week. Among these were 13 producers with an initial production of 130 bbls. and seven gas wells, two of which were fair. The larger number of completions was in Southeast Ohio.

SOUTHEAST OHIO

In Belmont County, there was one fair gas well and two dry holes. In Richland Township, SW Section 26, Peters and Patterson completed No. 3 on the Lorain Coal & Dock Co. lease in the Maxon sand at a depth of 1,002 feet. It is a gas well gauging 3,500,000 feet a day. In the same township but the northwest quarter of Section 21, Frank Stranges and others drilled a test on the James J. Hinkle farm through the Berea sand to 1,900 feet. It was a dry hole. In SE Section 19, Wayne Township, Wilson Brothers and others drilled a test on the A. J. Phillips farm through the Maxon sand to 1,500 feet. It was also dry.

In Coshocton County there was one new producer. In Section 17, Perry Township, Murphy Petroleum Co. and others completed a second test on the John S. Rine farm in the Clinton sand at 3,143 feet. The well has 1,200 feet of fluid in the hole and looks good for 75 to 100 bbls. a day after shot.

In Holmes County, Preston Oil Co. completed a test on the Silas Pyers farm, Lot 20, Monroe Township. It was drilled in the Clinton sand at 3,443 feet and is a gas well with 1,500,000 feet a day. This farm is 79 acres.

In Licking County, there were two shallow completions. In Mary Ann Township, Lot 2, C. R. Settles completed a second test on the O. B. Evans farm in the Berea sand at 585 feet. It produced 7 bbls. the first day after shot and will make about a 2-bbl. pumper. In Madison Township, Lot 23, George H. Long, Account No. 3, completed a second test on the Eliza J. Fulton farm in the Berea sand at 682 feet. It has a showing for a 1-bbl. pumper.

In Lorain County Wittmer Oil & Gas Properties drilled a test on the J. C. Aldrich farm, Lot 59, Grafton Township, through the Clinton sand to 2,640 feet. It was dry.

In Medina County, D. A. Lake drilled No. 18 on the Pearl and Frank Weaver farm in Section 1, Litchfield Township, through the Berea Grit to 320 feet. It was a dry hole.

In Muskingum County, Pure Oil Co. completed a test on the Francis M. Norman farm in the SE cor. Section 23, Brush Creek Township. It was drilled in the Medina sand at 3,960 feet and produced 12 bbls. the first day after shot. In Salt Creek Township and the SE cor. Section 11, Mid-East Gas Co. completed a test on the B. F. Young farm in the Clinton sand at a depth of 4,120 feet. It is a gas well gauging about 200,000 feet a day.

In Vinton County Co-operative Oil Co. drilled No. 6 on the Garfield Brooks farm, near Bollins Mills in Section 3, Knox Township. It is showing for a 1-bbl. pumper from the Berea grit at a depth of 1,190 feet.

In Washington County, Bay & Weppler and others completed No. 7 on the Christopher Lauer farm in Section 46, Salem Township, in the Buell Run sand at 286 feet. It produced 2 bbls. the first day after shot. In the same township, but Section 26, Pearl Sexton and others drilled No. 3 on the P. and A. Baye farm through the Stray sand at 701 feet. It was a dry hole. In NW cor. SW Section 26, Newport Township, Francis R. Meyer completed No. 16 on the Ada May Hall farm in the Mitchell sand at a depth of 647 feet. It produced a quarter of a barrel, natural, the first day and after shot is looking for a 1-bbl. well.

WEST VIRGINIA

There were five small producers completed in West Virginia during the week. In Marshall County Hazlett Brothers completed a test on the Ferdinand Otte farm in Union district in the Injun sand at a depth of 1,817 feet. It is showing for 8 bbls. a day.

In Ritchie County there were two producers. In the lower end of the old Pike Pool, Clay district, C. B. Smith and G. B. Hendershot completed a second test on the Charles Wilcox lease in the Big Injun sand and it is producing 10 bbls. a day. In Grant district Cabin Run Oil Co. completed a test on the J. B. Markey lease in the Big Injun sand at a depth of 1,858 feet. It has a showing for 5 bbls. a day along with about 148,000 feet of gas.

In Tyler County, Homer Smith and others completed a test on the W. J. Bell farm on Bens Run in Union district in the Cow Run sand. It will make about three-quarters of a barrel a day, after shot.

In Wayne County, on Whiles Creek in Union district, G. L. Meabon and others completed a test on the G. C. Chadwick farm in the Berea sand. It will make a 2-bbl. pumper. It is about 1,800 feet northeast of Chartiers Oil Co.'s No. 1 on the George W. Ronk farm.

Gas Wells

In Boone County, Cambridge Gas Co. completed No. 6 on the C. C. Lewis heirs farm in Washington district in the Berea sand at 2,540 feet. It is a gas well with 260,000 feet a day.

In Gilmer County, on the waters of Tanner Creek in DeKalb district. Clem S. Morris and others completed No. 5 on the Cora B. Gainer farm in the Injun sand as a light gas well. In Troy district Mudlick Oil & Gas Co. drilled a test on the L. G. Garrett farm on Horn Creek through the Gantz sand to 2,644 feet. It was a dry hole.

In Monongalia County, Curtis B. Fleming, successor to Pedlar Run Oil Co., completed the test on the Lewis R. Hess farm in Clay district by drilling it to the Bayard sand, a depth of 3,215 feet. It had a small showing of oil in the Injun sand and also the Bayard but the well is otherwise dry.

In Ritchie County L. P. Bickel completed a second test on the P. W. Morris and others lease on Leatherbark Creek in Murphy district in the Injun sand at a depth of 1,819 feet. It is a gas well with about 336,000 feet a day.

In Tyler County, Lick Run Oil Co. drilled a test on the P. D. Ash farm in Ellsworth district through the Big Injun sand to 1,925 feet. It is a dry hole.

Drilling in West Virginia

The most important development in new work is in Elk district, Kanawha County, where the recent Oriskany sand producer was brought in. About a mile up Coopers Creek from the hard road at its mouth, Grosscup and others have made a location for another test and have a double crew building a rig. This is about a half to three-quarters of a mile north of the recent test, and is on the W. L. Copen farm, mapped as the Copen heirs. The test on the W. L. Burdette farm is not producing but the hole again filled up after its flow on being agitated. This well is cased 1,548 feet of the total depth of 4,826 feet. A string of 5⅛-inch casing has been ordered and after it is run in the hole, the well will be drilled deeper into the Oriskany, as it has barely penetrated the formation, and then shot. It is the present focus of interest.

In Boone County Pond Fork Oil & Gas Co. is moving in the tools to start drilling No. 19 on the Cole and Crane lease in Washington district. Godfrey L. Cabot, Inc., has reached 1,350 feet on the White and Hopkins farm, and has the rig completed on the H. Nunnenkamp and others lease.

In Cabell County, R. H. Adkins, trustee, is drilling on the M. J. Johnson farm in McComas district and past the 1,000-foot level. No other wells are reported active.

In Calhoun County, W. B. Reed and others have started drilling on the Curtis and Ella May farm in Washington district. Knotts Oil & Gas Co. is down 1,400 feet on the Phillips Cottrill farm. Kenny and Phillips have completed the rig on the S. A. Carpenter farm. In Lee district, F. F. McIntosh has abandoned locations for tests on the Carr Shafer and F. L. Haymaker farms, and is building a rig on the E. L. Hays farm. Southwestern Oil & Gas Co. has shut down at 830 feet and is cementing a cave. Jarvis and Ayers are still fishing at 1,100 feet for the tools on the Roanna Robinson farm. In Sherman district three rigs are standing, F. F. McIntosh on the Seymore Settle farm, I. B. Fowler and others on the I. B. Fowler farm, and L. P. Bickle and others on the Martha Stump heirs farm. The first two are for tests. In Center district, two rigs are standing, Chemical Oil Co.'s No. 7 on the Tazwell Taylor farm, and Howard Brothers' test on the L. F. Norman farm.

Gilmer County

In Gilmer County, McCall Drilling Co. has started drilling deeper No. 3 on the Riddle Brothers lease in DeKalb district. It is now at 1,885 feet. Same operators have a rig on the G. W. Wigner and others lease. In Center district same operators are drilling at 2,040 feet in No. 5 on the L. R. Moore farm and have a rig for a second test on the M. S. Cawthorn lease. K. M. Hunt and others have reached 1,275 feet on the J. R. Simmons and others lease and West Virginia Utilities Corp. is down 1,910 feet on the John J. Gerwig farm, a test.

In Lincoln County, Hamlin Drilling Co. is down 1,750 feet on the Victoria Adkins farm in Carroll district. In Washington district, Harvard Gas Co. has reached 4,267 feet in drilling deeper No. 3 on the Standard Fuel Gas Co. lease.

In Marion County, Maxon Oil & Gas Co. has rig material on the Ash heirs farm in Mannington district. Delmar Oil Co. is down 3,183 feet in No. 7 on the Z. E. and A. M. Batson farm.

In Lost Run Pool in Clay district, Ritchie County, Lucky Strike Oil Co. has completed a rig for a second test on

(Continued on Page 69)

Bureau of Mines Report on Petroleum and Petroleum Products for August

Crude Petroleum: According to reports received by the Bureau of Mines, Department of the Interior, the production of crude petroleum in the United States during August totaled 79,058,000 bbls. This represents a daily average of 2,550,000 bbls., which is 81,000 bbls. below the average in July and 208,000 bbls. below the daily average of a year ago.

Although a number of states shared in the decline in output in August, the major portion was borne by the three leading producers, Texas, California and Oklahoma; in fact, the daily average output of these three states decreased 79,000 bbls. out of the total of 81,000 bbls. The daily average output both in California and Oklahoma declined to below the 500,000-bbl. mark for the first time in several months. California's decrease was fairly well distributed among the major districts but the Oklahoma City Field bore the brunt of the decline in Oklahoma. In Texas, the East Texas Field was about the only important producing area that showed a decrease; in fact, all of the others, except the Panhandle, showed an increase. Production in East Texas declined from 543,000 bbls. daily in July to 486,000 bbls. daily in August, although the number of completions increased. The number of drilling wells in the East Texas Field on August 31, 229, was the lowest since December, 1933. The upward trend in production in Louisiana was checked in August but the daily average continued at close to 100,000 bbls.

Daily average crude runs to stills in August were at practically the same rate as in July, hence the decline in output was reflected in heavier withdrawals from stocks. Thus total stocks of refinable crude declined nearly 4,500,000 bbls. in August (from 355,260,000 bbls. on August 1 to 350,838,000 bbls. on August 31), compared with a net withdrawal of about 2,000,000 bbls. in July.

Refined Products: The percentage yield of gasoline increased from 43.7 per cent of crude runs in July to 44.2 per cent in August, hence the daily average output of motor fuel showed a further gain of from 1,214,000 bbls. in July to 1,230,000 bbls. in August. The indicated domestic demand for motor fuel totaled 39,933,000 bbls., a daily average of 1,256,000 bbls. Compared with a year ago, these data indicate a gain in domestic demand of 4 per cent. Exports of motor fuel, which had been running behind last year's record, was slightly more than 10 per cent higher in August, 1934, than they were a year ago. Stocks of motor fuel declined approximately 3,000,000 bbls. during the month.

According to the Bureau of Labor Statistics, the price index for petroleum products during August, 1934, was 51.6, compared with 51.3 in July and 40.9 in August, 1933.

The refinery data of this report were compiled from refineries with an aggregate daily recorded crude-oil capacity of 3,548,000 bbls. These refineries operated during August at 72 per cent of their capacity, given above, which compared with a ratio of 73 per cent in July.

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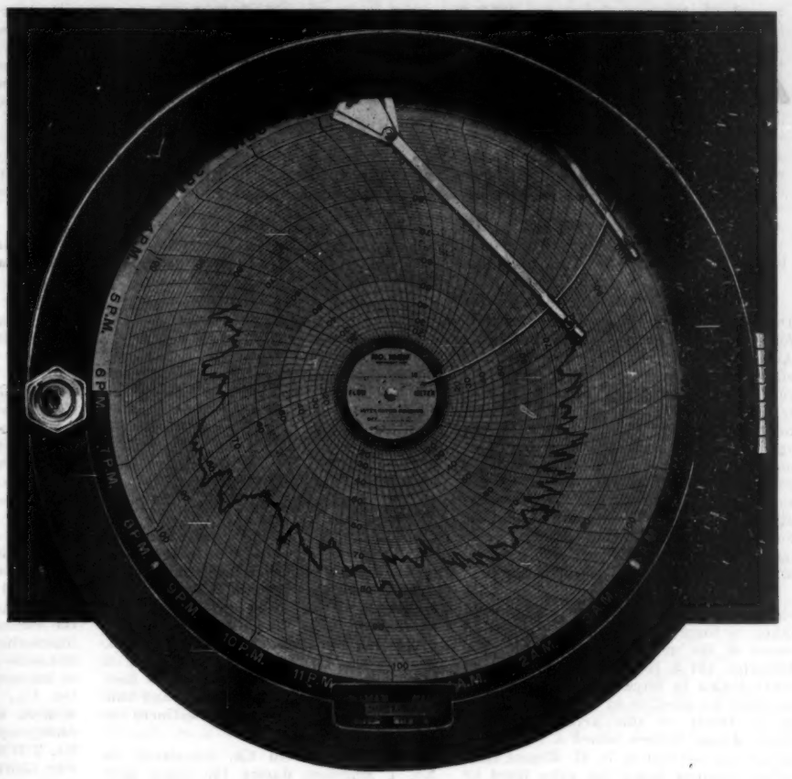

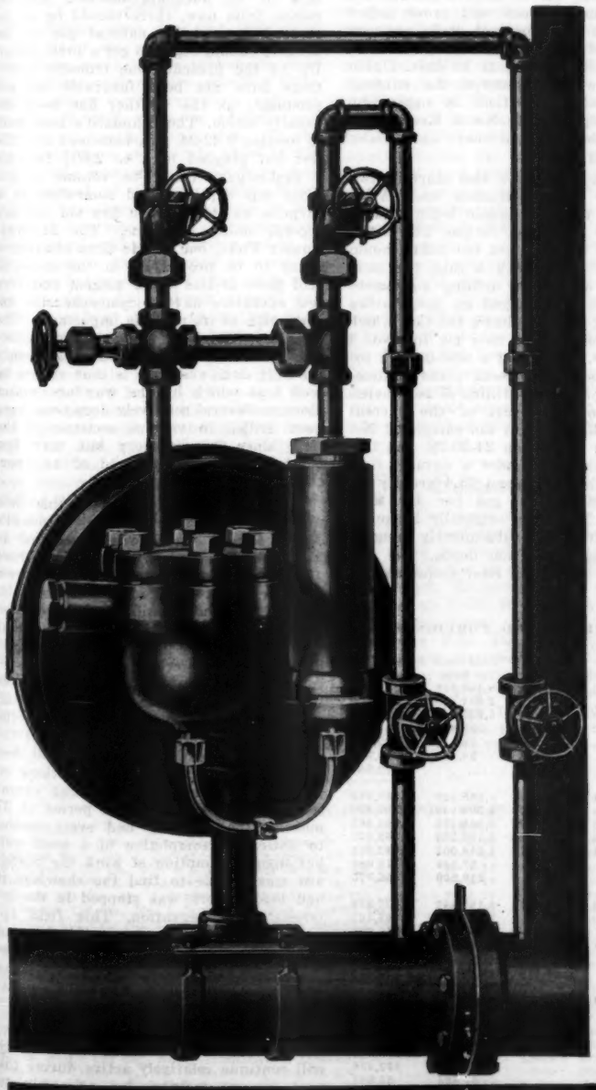

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Another Drastic Effort for Stabilization Is Begun to Buttress the Situation in California Fields

By L. P. STOCKMAN
Staff Correspondent, California Fields

LOS ANGELES, Calif., Oct. 8.—Drastic action is being taken in California by the Pacific Coast Petroleum Agency and marketing companies in an effort to stabilize the price structure of refined oil which has been weakening from week to week in spite of all efforts to the contrary. Early this week the agency notified marketers that they must not deliver gasoline to resellers who have been consistently cutting the price and as a result approximately 100 resellers are on the spot. These stations can no longer secure supplies of gasoline from members of the agency and from now on must rely on the chiselers for motor fuel.

In addition to putting these stations on the blacklist further action was taken to force compliance with the covenants of the marketing agreement. The Edington Oil & Refining Co. resorted to court action to force one of its resellers to retail its gasoline at the posted price. As a result of this action, Superior Court Judge Wilson issued a temporary injunction restraining R. H. Rogers from selling gasoline below the price fixed by the manufacturer. The plaintiff, Edginton Oil & Refining Co. asserted that gasoline was sold to the defendant on delivery tags, which he signed, fixing the retail price at 15½ cents per gallon. The plaintiff maintained that the defendant sold the gasoline at 1 cent below the established price and thus disrupted the retail market in the vicinity of his station. The restraining order will remain in effect until the case can be tried on its merits which may be several months. The issuance of this injunction should prove a deterrent to future price cutting especially in view of the fact that the agency's blacklist will prevent further deliveries in cases where marketers have consistently cut retail prices.

October Quotas

As had been expected, the issuance of production quotas for California fields failed to show any very great change from those in effect during the previous month. Fields showing the largest reductions in allowable production for October include Midway-Sunset which was cut 2,542 bbls. per day; Long Beach down 1,280 bbls.; Kettleman North Dome down 955 bbls. per day; Santa Fe Springs down 460 bbls. and Huntington Beach which was reduced 485 bbls. per day. Very few fields were given increases of any consequence as the state's allowable for October is 4,700 bbls. per day lower than the permissible during the previous month. Kettleman Middle Dome Field where a new well was recently finished was given an increase of 110 bbls. and Mountain View was stepped up 115 bbls. per day. The small increase given the latter field has been severely critcized in view of the several excellent producers finished in that area during the past month. The Mount Poso Field was given an increased allowable of 265 bbls. per day and the Edison Field, located east of Mountain View, was stepped up 150 bbls. per day. The changes reflected by these fields are in conformity with the existing program of having the Bureau of Mines establish the amount that each geographical section of the state can produce during a given month. Under this plan, the bureau gives the San Joaquin Valley a certain allowable, the coastal section another and Los Angeles Basin fields a third amount. All allowables are supposed to be established in accordance with established rules although a number of operators feel that the method of segregating the state into three divisions is not at all equitable.

Santa Barbara

The Santa Barbara Mesa is still one of the hottest spots in California although this field has not shown any substantial increase in production during the past six weeks notwithstanding that a number of large flowing wells have been completed. The failure of this field to reflect completion of these substantial flowing wells is attributed to the fact that only a few of them have remained on production due either to lack of adequate storage facilities or inability to market current production. This field is rather small in areal extent and the absence of pipe line facilities renders disposal of production quite a problem. Seaside Oil Co. has been purchasing a large part of the production of this field during the past several months and this is moved to the company's refinery at Ventura.

Trans-Oceanic Oil Co. completed its No. 1 Morrison during the latter part of the current week and this new well was brought in flowing 1,300 bbls. of clean 18.4 gravity oil per day from 2,025 feet. Its completion extended hte limits of the field about 200 feet as it is about two locations removed from P. J. Lousterlot's new well which was finished last week. Drilling operations in this field are rather congested due to town lot drilling and hence 200 feet looks quite large to some of the townlotters. The Santa Barbara Mesa Field has been in the limelight for the past several weeks due to the completion of several rather large flowing wells, but for the reasons mentioned the field has failed to reflect these new wells from a production standpoint. This district is rather active from a leasing angle and independent operators are paying unreasonable cash bonuses and high oil royalties. Two or three additional new wells are scheduled for completion during the next week or 10 days and judging by their locations they should register an initial comparable with other recent completions.

Mountain View

The Mountain View Field of Kern County will continue to be rather active for the next several months if the increasing number of new locations is any criterion of the attitude of operators with respect to future development work. The Associated Oil Co. has stepped into the field for the first time and will proceed to drill two new wells in the immediate future. Both projects, No. 1 Di Giorgio in Section 3-31-29 and No. 1 Nunez in Section 14-30-28, may be considered important tests due to their locations and the outcome of work will prove rather interesting. Rigs for both wells are now in course of construction and spud should be made within the next 10 days. Union Oil Co., which pioneered the extreme western end of the field, is rigging up rotary equipment for No. 3 Kernco and No. 2 Wible and should have them under way shortly.

Standard Oil Co. is also starting two new wells on the Ranton and Wible leases and they too should begin making hole in the immediate future. The Texas Co., a late entrant into the field, should spud in No. 3 Smith within the next few days as rotary drilling equipment has already been rigged up preparatory to an early spud. Mohawk Oil Co., which recently completed a new rig for No. 1 Clendennen, is erecting a new derrick for No. 5 Hood and present plans contemplate the immediate drilling of both holes. During the early part of the current week the Mohawk Oil Co. completed No. 1 Vineland in Section 24-30-28, and this new well came in under a natural flow doing 601 bbls. of clean 28.4 gravity oil and 290,000 feet of gas per day from 5,575 feet. This well, originally bottomed at 5,720 feet but subsequently plugged back to the completion depth, was finished with a 6⅝-inch liner including 257 feet of perforated and 5,297 feet of 8-inch tubing. Hancock Oil Co., which has experienced considerable success in its development program in the Long Beach Field of Los Angeles Basin, has started rig construction for No. 1 Miller a new well to be drilled in the Mountain View Field in Section 14-30-28 and it appears quite probable that the company will get good production.

Midway-Sunset

The Standard's No. 112-9-D in the Midway-Sunset Field of Kern County came in as a gasser flowing 11,000,000 feet of gas initially a few days ago and it was subsequently shut in due to the lack of an adequate market. Another month from now, there should be an increased demand for natural gas as the weather should begin to get a little cooler. Up to the present time climatic conditions have not been favorable for gas producers as the weather has been unusually warm. The Standard's new well, in Section 9-32-24, was bottomed at 2,150 feet but plugged back to 2,007 feet for a preliminary test. The volume of gas from this depth proved somewhat of a surprise as this horizon has not set any records along this line. The Midway-Sunset Field, one of the first productive areas to be proved up in the state, is still more or less of an enigma and very few operators have a comprehensive appreciation of its possible importance. The field was developed long before perfection of the core barrel and consequently the only data available is that shown by well logs which by the way are rather obscure. Several relatively deep tests have been drilled in various sections of the field since its discovery but very few of them can be considered of any particular value.

The deepest well drilled in this field up to the present was the Standard's No. 1 Mascot which was abandoned as a duster. Deep as this well was, there are many who doubt whether the test can be considered as conclusive. The dubiousness of those familiar with work on the well is attributed to the fact that the well actually made about a barrel or two of light crude oil and also because of the probability that the hole is reported to have shown a substantial deviation from the vertical. Due to the depth of No. 1 Mascot, the bottom of the hole might easily be located 1,000 feet or more from the base of operations on the surface. Just before drilling operations were suspended for a period of 27 months, the company had every reason to anticipate completion of a good well but upon resumption of work the Standard was unable to find the showings it had before work was stopped in the interests of conservation. This field appears to have dormant possibilities and it is quite likely that eventually some courageous operator will start deep zone exploration and find something interesting.

Mount Poso

The Mount Poso Field of Kern County will continue relatively active during the next several months due primarily to operations of the Union and Shell. This new work will not be reflected in production, however, as these two operators are merely drilling up acreage so that they will be able to produce their quota in the event that the field is given an increased quota early next year. Both companies have considerable acreage which should be developed and they are accordingly going ahead in a conservative man-

TANKER SHIPMENTS FROM LOS ANGELES TO DOMESTIC AND FOREIGN PORTS

	Sept. 23		Sept. 16			
	Total this week	Daily average	Total last week	Daily average	This year to date	Same time last year
Intercoastal-domestic—						
Fuel oil	118,585	16,984	158,875	22,696	10,160,296	915,302
Diesel and fuel oil	.....	.....	.....	.....	1,021,175	1,300,559
Gasoline	140,236	20,043	254,533	36,362	5,833,285	8,084,190
Kerosene	70,050	10,007	74,292	10,627	798,453	589,306
Asphalt	.....	.....	.....	.....	70,019	12,179
Other finished oil	.....	.....	.....	.....	54,778	75,318
Other unfinished oil	.....	.....	.....	.....	.....	72,584
Foreign exports—						
Crude oil	199,077	28,440	170,584	24,369	5,865,199	5,649,963
Fuel oil	501,996	71,714	127,849	18,264	9,506,642	6,120,377
Diesel and gas oil	.....	.....	10,842	1,595	2,963,573	2,501,483
Gasoline	12,894	1,842	67,340	9,620	3,193,269	4,368,031
Kerosene	27,684	3,955	25,851	3,697	1,344,002	1,481,313
Other finished oil	34,426	4,918	.....	.....	37,955	12,086
Other unfinished oil	.....	.....	.....	.....	210,500	86,375
Coastwise-domestic—						
Crude oil	62,590	8,941	270,912	38,702	6,167,842	5,627,393
Fuel oil	245,122	35,017	231,032	44,433	7,079,666	7,505,162
Diesel and gas oil	1,536	219	22,197	3,171	541,300	866,529
Gasoline	168,490	24,070	307,171	43,882	9,449,636	9,426,490
Kerosene	1,846	264	.....	.....	111,508	149,265
Naphtha distillates	.....	.....	.....	.....	.....	27,651

TANKER SHIPMENTS FROM SAN FRANCISCO TO DOMESTIC AND FOREIGN PORTS

Intercoastal-domestic—						
Fuel oil	.....	.....	.....	.....	110,650	.....
Diesel and gas oil	.....	.....	.....	.....	536,388	400,078
Gasoline	.....	.....	.....	.....	290,825	775,535
Kerosene	.....	.....	.....	.....	276,412	482,430
Lubricants	.....	.....	.....	.....	34,695	33,541
Foreign exports—						
Crude oil	.....	.....	34,714	12,102	1,493,701	1,320,641
Fuel oil	.....	.....	35,121	3,589	1,581,207	1,040,549
Diesel and fuel oil	.....	.....	.....	.....	1,085,850	824,450
Gasoline	.....	.....	.....	.....	2,411,704	3,163,072
Kerosene	.....	.....	.....	.....	789,174	909,705
Lubricants	.....	.....	.....	.....	143,157	96,370
Other finished oil	.....	.....	.....	.....	2,760	8,745
Other unfinished oil	.....	.....	.....	.....	5,750	26,278
Coastwise-domestic—						
Fuel oil	.....	.....	.....	.....	4,247,430	3,565,926
Diesel and gas oil	.....	.....	.....	.....	119,036	179,250
Gasoline	29,423	4,203	216,750	30,107	3,899,333	2,995,174
Kerosene	.....	.....	.....	.....	64,895	95,204

ner. Other operators in this field have done some drilling earlier in the year but have not undertaken any new work for the past several months.

Early this week the Shell completed No. 5 Vedder-Rall and this well was brought in pumping 280 bbls. of 17.6 gravity oil per day from 1,890 feet. The initial production of this project was somewhat below expectations but may build up after the well has been on production for another week or 10 days. In addition to No. 5 Vedder-Rall, the Shell completed drilling operations on No. 10 Vedder but the initial tank gauge is not yet available as some difficulty has been experienced in getting the well on the beam. Union Oil Co. has concluded drilling operations on No. 12 S. & M. at 1,764 feet and this new well will be put on the pump within the next few days with a good prospect of showing an initial daily production somewhere in the neighborhood of 600 bbls. Both the Union and Shell are making preparations to drill additional wells in this field in the immediate future and consequently additional completions may be anticipated within the next 30 days. The Pongratz Oil Co. is rigging up rotary drilling equipment on No. 4 Tavis and this well should begin making hole within the next few days.

Edison

The Edison area does not look quite as hot as it did a few weeks ago and indications point to the probability that this district will require selective drilling. In other words, operators will not be able to drill wells at random and develop substantial production. At the same time there are certain areas in the field where commercial production may be developed at shallow depths. When drilling operations got under way in this district a few months ago operators were of the opinion that production might be found over a rather broad expanse of territory but soon found that such was not the case. As a result several dry holes have been drilled in sections that were heretofore considered proved up.

The Western Gulf Oil Co., discoverer of the Fruitvale Field of Kern County, completed No. 1 Parker in that field during the early part of the current week and this new well was brought in flowing 1,060 bbls. of clean 19.9 gravity oil per day from 3,612 feet after hole had been finished with a 6⅝-inch liner including 210 feet of perforated. The initial of this new well proved somewhat of an agreeable surprise as No. 1 Parker showed the largest daily production registered in a long time. Upon completion of this well the Western Gulf began rigging up rotary drilling equipment on No. 3 Sweitzer preparatory to an early spud. Out in the McKittrick front, the Standard is drilling ahead in its No. 45 at 4,600 feet but has not yet found a second productive gas zone or any indications that oil production might be anticipated in the near future. This well is still rather shallow, however, and may yet show favorable indications. At Blackwell's Corners, the Amerada Petroleum Corp. is making preparations to test out some showings that offer promise of possible production and it is unnecessary to say that the outcome of the tests will be watched with considerable interest. Over in the Devils Den region, not very far removed from the Amerada's test, the General Petroleum has staked tentative location for a new wildcat to be drilled in Section 20-24-18.

Montebello

The deep Cruz zone in the Montebello Field of Los Angeles Basin has failed to become the factor that it was expected to be and unless something changes the picture in the near future exploration of this horizon will soon be suspended. Drilling in this field has proven one of the most costly fiascos since development of the Lawndale Field of Los Angeles Basin where operators paid substantial bonuses for acreage and then failed to produce a drop of oil. The exact status of conditions in the Montebello Field has not yet been determined due to the inability of operators to find any uniformity in subsurface conditions. Depth of the various projects apparently does not mean a thing from a drilling standpoint. Production tests are expected to be completed on two deep wells in this field during the next week or 10 days but they are not due to reveal anything of interest due to their location on the structure and the depths at which drilling operations have been concluded.

Wilshire Oil Co., following the failure to effect a satisfactory water shutoff in its test in the Potrero Field of Los Angeles Basin, has resumed drilling and cores still show substantial oil sand. This well just previous to the production test showed considerable gas pressure and every indication that commercial oil production might be anticipated but it failed to come up to expectations. In the West Coyote Field, the Standard completed No. 119 Murphy Coyote a new well which was brought in pumping 60 bbls. of 24-15 gravity oil per day from 5,639 feet. In the Playa Del Rey Field, the Ohio Oil Co. has concluded drilling operations on No. 15 Recreation and a production test will be made within the next 10 days with the outlook good for commercial production.

Eastern Fields

(Continued from Page 66)

the J. F. Goodwin heirs farm, about 450 feet north of No. 1. Same company has reached 750 feet on the J. D. Rymer farm, same pool. Richards Farm Oil Co. is drilling at 1,400 feet in No. 5 on the Corlie Ball farm.

In the Pike Pool in Clay district, Ritchie County, work is active. C. L. Donaldson and others have a rig standing on the J. P. Strickler lease, Ralph Roberts is down 1,625 feet on the William Mercer town lot. Murphy and others have reached 1,756 feet on the M. E. Church lot, J. C. Smith and others have reached 1,500 feet on the Lewis Hanlon farm. A. R. Kelley and others have started drilling on the John Wagner farm.

Roane County

In Roane County, United Fuel Gas Co. is building a rig for No. 4,536 on the T. Ferrell farm in Smithfield district. Charles Despard has started drilling the second well on the Charles Starcher farm. In Curtis district, Henderson Oil Co. has started drilling No. 3 on the F. H. Bee, Jr., farm. Reedy Oil & Gas Co. is down 750 feet on the L. M. Riddle farm, No. 6. In Harper district, K. M. Hunt and others are rigging up on the Oscar Kelly farm. In Spencer district, O. G. Epling is drilling at 2,015 feet on the L. P. Starr farm, a test.

SOUTHWEST PENNSYLVANIA

There were two dry holes, one gas well and one small producer completed in Southwest Pennsylvania during the week. In East Findley Township, Washington County, H. V. Sprowls & Co. completed No. 4 on the John Logue farm in the Fourth sand at 2,960 feet showing for 5 bbls. a day.

In West Bethlehem Township, Washington County, George Gray completed No. 3 on the J. H. Dague farm at a total depth of 1,425 feet, the Salt sand. It is a gas well gauging 170,000 feet a day with a rock pressure of 300 pounds.

In Chartiers Township, Washington County, Cannonsburg Iron & Steel Co. drilled a test on the Jeff Tarr farm through the Fifth sand to a total depth of 2,425 feet and it was dry. In Beaver County, Laughner Oil & Gas Co. drilled a test on the Peters farm in South Beaver Township through the Berea grit and it was also dry.

In Greene County, Equitable Gas Co. is rigging up to drill deeper the well on the Margaret Kiger farm in Wayne Township to lower sands. It is starting at 2,378 feet, the Big Injun sand. In Richhill Township, about 1½ miles south of Ryerson Station, Guy Patterson is drilling No. 3 on the T. M. Ross farm. In Dunkard Township, Vance Leases are drilling at 340 feet on the James and Willis Vance farm.

In Franklin Township, Greene County, Carnegie Natural Gas Co. is down 2,907 feet in drilling deeper No. 2 on the Emma Lapping farm. There was about 237,000 feet of gas a day in the Fifty-foot sand at 2,578 feet which blew down to about 190,000 feet. In the Thirty-foot sand, there was a showing of about 220,000 feet a day.

In Amwell Township, Washington County, Carnegie Natural Gas Co. has reached 2,795 feet on the A. M. Cole farm. There was a show of gas in the Thirty-foot sand. Same company is hauling in the rig to start No. 2 on the Manon farm. Manufacturers Light & Heat Co. is spudding on the R. A. Rankin farm an offset to the fair gasser on the C. W. Farabee farm. Carnegie Natural Gas Co. is cleaning out No. 1 on the M. A. Manon farm after shot.

In East Findley Township, Myers Hoskinson & Co. have rig on the M. C. Francis farm about 1,000 feet southwest of the Sprowls No. 2.

IMPORTANT SOUTHERN CALIFORNIA WILDCATS

Company, well, location—	S.T.R.	Depth	Status
Clayton, G. L., No. 1 Cerritos, Los Angeles Co.	31- 3-12	6,698	fish. D/P
Kelly & Son., No. 1 Torrance, Los Angeles Co.	7- 4-13	6,423	suspended
Woodward Oil Co., No. 1 Athens, Los Angeles Co.	12- 3-14	5,543	suspended
Houser, G. W., No. 1 Athens, Los Angeles Co.	18- 3-14	4,037	cleaning out
Scientia Oil Co., No. 1 Inglewood, Los Angeles Co.	7- 2-14	3,375	prod. test
Plymouth Oil Co., No. 1 Inglewood, Los Angeles Co.	8- 2-14	5,062	cleaning out
Wilshire Oil Co., No. 2 Potrero Deep, Los Angeles Co.	27- 2-14	7,985	core O. S.
Fourl, C. W., No. 1 Del Rey, Los Angeles Co.	27- 2-15	5,875	sd. sh. drilling
Staple Oil Co., No. 1 Manhattan, Los Angeles Co.	24- 3-15	3,295	gr. sh. drilling
Standard Oil Co., No. 1 Montebello Deep, Los Angeles Co.	6- 2-11	7,832	gr. sd. drilling
St. Helens, No. 1 Montebello Deep, Los Angeles Co.	6- 2-11	7,038	O. S. cmtd.
Fullerton Oil Co., No. 1 Montebello Deep, Los Angeles Co.	6- 2-11	7,055	looks wet
Shively, N. O., No. 1 Puente Hills, Los Angeles Co.	23- 2-10	mtl.	bldg. rig
Pressel & Tull, No. 1 Puente Hills, Los Angeles Co.	30- 2-9	3,594	br. sh. drilling
Barstow Oil Co., No. 2 Saugus, Los Angeles Co.	35- 5-16	2,400	suspended
International Dev. Co., No. 1 Saugus, Los Angeles Co.	34- 5-16	3,296	hd. sd. drilling
Black Eagle Oil Co., No. 1 Huntington, Orange Co.	tideland	4,021	br. sh. drilling
Explorers Drlg. Co., No. 1 Fairview, Orange Co.	9- 6-10	945	plug 438
Nuoil Co., No. 1 Newport, Orange Co.	29- 6-10	6,485	fishing D/P
B. & B. Oil Co., No. 1 Newport, Orange Co.	19- 6-10	rig	suspended
Platt & Collins, No. 1 Costa Mesa, Orange Co.	14- 6-10	2,586	fishing D/P
Mid-Rich Drlg. Co., No. 1 Atwood, Orange Co.	26- 3-9	3,851	br. sh. drilling
Bridger, J., No. 1 Coyote, Orange Co.	15- 3-10	5,410	suspended
Great American Pet., No. 2 East Coyote, Orange Co.	19- 3-9	656	drill out cmt.
Great American Pet., No. 1 Chino, San Bernardino Co.	13- 2-8	2,462	suspended
Great American Pet., No. 2 Chino, San Bernardino Co.	18- 2-8	3,152	suspended
Great American Pet., No. 3 Chino, San Bernaardino Co.	7- 2-8	121	sd. drilling
Tehama Pet., No. 1 Santa Ana Canyon, S. Bernardino Co.	33- 2-8	2,720	br. sh. drilling
San Diego Pet. Co., No. 1 Chula Vista, San Diego Co.	22-18-2	5,460	gr. sh. drilling
Edmonds, E. A., No. 1 Trustee, San Diego Co.	29-15-3	1,768	sd. sh. drilling
Everts Drlg. Co., No. 1 Camp Kearny, San Diego Co.	23-15-2	512	sd. sh. drilling
Great Coastal Oil Co., No. 1 Elsinore, Riverside Co.	36- 5-5	mtl.	bldg. rig

IMPORTANT NORTHERN CALIFORNIA WILDCATS

Company, well, location—	S.T.R.	Depth	Status
General Pet., No. 11 Capitan, Santa Barbara Co.	32- 5-30	1,300	hd. sh. drilling
Shell Oil Co., No. 3 Capitan, Santa Barbara Co.	33- 5-30	2,374	sd. sh. drilling
Petroleum Sec., No. 1 Los Alamos, Santa Barbara Co.	6- 7-32	4,570	br. sh. drilling
Barnsdall, No. 2 Gate Ridge, Santa Barbara Co.	9- 8-32	....	gr. road; idle
Royalty Ser. Corp., No. 1 Los Alamos, Santa Barbara Co.	35- 9-32	2,926	sd. sh. drilling
Union, No. 2 Santa Maria, Santa Barbara Co.	24-10-34	2,389	sanded up
Signal Oil & Gas Co., No. 1 Elwood, Santa Barbara Co.	tideland	2,815	sd. sh. drilling
Barnsdall-Rio Grande, No. 8 Doty Elwood, S. Barbara Co.	15- 4-29	5,732	redrlg. 3,250
East Elwood Pet. Co., No. 1 Elwood, Santa Barbara Co.	14- 4-29	3,512	suspended
Shell Oil Co., No. 1 Goleta, Santa Barbara Co.	20- 4-28	4,100	gr. sh. drilling
North American, No. 1 Goleta, Santa Barbara Co.	10- 4-28	2,480	suspended
Standard Oil Co., No. 2 Goleta, Santa Barbara Co.	17- 4-28	4,850	redrlg. 3,135
Ortega Oil Co., No. 1 Summerland, Santa Barbara Co.	16- 4-26	3,829	redrlg. 3,737
Cuyama Valley Oil Co., No. 1 Cuyama, Santa Barbara Co.	12-10-27	4,196	suspended
Woodrow Pet., No. 1 Rincon, Ventura Co.	4- 3-24	7,612	redrlg. 5,921
Continental, No. 3 San Miguelito, Ventura Co.	23- 3-24	6,760	O. S. drlg.
Texas Co., No. 128 South Mountain, Ventura Co.	4- 3-19	3,775	drlg. ahead
Oil Ridge Oil Co., No. 1 Fillmore, Ventura Co.	1- 4-19	1,353	test W.S.O.
Bolsa Chica Oil Co., No. 2 Piru, Ventura Co.	4- 4-18	mtl.	bldg. rig
Piru Oil Co., No. 1 Piru, Ventura Co.	14- 4-18	1,300	suspended
Paloma Oil Co., No. 1 Santa Susana, Ventura Co.	12- 2-18	606	suspended
American Drlg. Co., No. 1 Simi, Ventura Co.	6- 2-17	903	cemented
Dawson Oil Co., No. 1 Simi, Ventura Co.	5- 2-17	1,420	sd. sh. drilling
Rancho Oil, Inc., No. 1 Ojai, Ventura Co.	18- 4-23	1,697	sd. sh. drilling
Continental, No. 1 Ojai, Ventura Co.	12- 4-23	mtl.	bldg. rig
Prop. Service Corp., No. 1 Lloyd, Ventura Co.	24- 3-23	6,850	O. S. drlg.
Kirk, W. A., No. 1 Sulphur Mountain, Ventura Co.	21- 4-22	2,400	rig to pump
Mosher, J. W., No. 1 Santa Paula, Ventura Co.	23- 4-21	2,300	cleaning out
Standard Oil Co., No. 1 McKittrick, Kern Co.	15-30-22	4,600	sd. sh. drilling
Casa Mira Oil Co., No. 1 Belridge, Kern Co.	29-28-20	5,830	suspended
General Pet., No. 1 South Belridge, Kern Co.	30-28-21	11,377	suspended
Union Oil Co., No. 18 North Belridge, Kern Co.	36-27-20	5,523	fish. D/P
Standard Oil Co., No. 1-A North Belridge, Kern Co.	36-27-20	rig	rigging up
Associated Oil Co., No. 1 Lost Hills, Kern Co.	2-26-20	7,853	pl. 6,850; idle
Amerada Pet., No. 1 Blackwells Corner, Kern Co.	17-26-19	2,722	make pr. test
Home Corp., No. 1 McFarland, Kern Co.	16-26-27	1,394	sd. sh. drilling
Ohio Oil Co., No. 1 McVan, Kern Co.	22-27-27	1,364	prod. test
Pell Oil Co., No. 1 McVan, Kern Co.	14-27-27	rig	rigging up
P. H. Greer Co., No. 1 Mountain View, Kern Co.	9-31-29	....	location
Hancock Oil Co., No. 1 Mountain View, Kern Co.	14-30-28	mtl.	bldg. rig
Associated Oil Co., No. 1 Mountain View, Kern Co.	3-31-29	mtl.	bldg. rig
Texas Co., No. 1 Mountain View, Kern Co.	14-30-28	5,461	hd. sd. drilling
Barnsdall, No. 2 Mountain View, Kern Co.	32-30-29	5,685	reaming
Hogan Pet., No. 5 Mountain View, Kern Co.	32-30-29	6,287	recmt. 6,191
Standard Oil Co., No. 3 Mountain View, Kern Co.	23-30-29	5,415	sd. sh. drilling
Wood-Callahan, No. 1 Mountain View, Kern Co.	36-30-29	5,604	pl. 5,464; idle
Gilco, Inc., No. 2 Edison, Kern Co.	23-30-29	121	sd. drilling
Jergins Trust, No. 1 Edison, Kern Co.	23-30-29	3,815	will deepen
Jergins Trust, No. 2 Edison, Kern Co.	14-30-29	2,032	will deepen
Jergins Trust, No. 3 Edison, Kern Co.	14-30-29	rig	suspended
Shell Oil Co., No. 1 Edison, Kern Co.	16-30-29	4,360	sd. sh. drilling
Edison Oil Co., No. 1 Edison, Kern Co.	15-30-29	3,637	reaming
Barnsdall, No. 1 Edison, Kern Co.	26-30-29	2,477	abandoned
Centralia Oil Co., No. 1 Edison, Kern Co.	26-30-29	3,200	pump 25 B.D.
Ohio Oil Co., No. 1 Edison, Kern Co.	36-30-29	3,173	plug 925 wet
Mitchell-McMillan, No. 1 Edison, Kern Co.	8-30-29	rig	suspended
Lee Oil Co., No. 1 Edison, Kern Co.	5-30-29	2,892	hd. sd. drilling
Tejon Ridge Oil Co., No. 1 Commanche, Kern Co.	23-32-29	1,250	sd. sh. drilling
101 Oil Co., No. 1 Elk Hills, Kern Co.	5-30-24	rig	rigging up
Badger Oil Co., No. 1 Wheeler Ridge, Kern Co.	31-11-19	6,101	sd. sh. drilling
Russ Oil Synd., No. 1 Kingsburg, Fresno Co.	28-12-11	4,438	cleaning out
Bergman, Harry, No. 1 Kingsburg, Fresno Co.	12-12-11	6,138	redrlg. 5,515
Union Oil Co., No. 1 Lillis-Kettleman, Fresno Co.	24-21-16	10,944	sidetrack D/P
Western Gulf, No. 2 S. P., Fresno Co.	11-17-15	6,400	coring
Farrel Pet., Well No. 1 San Luis Obispo Co.	18-31-12	1,250	sd. sh. drilling
Willett Oil Co., No. 2 Cholame, San Luis Obispo Co.	10-25-15	2,202	suspended
Commonwealth Consd. Gas, No. 1 Tulare Lake, Kings Co.	21-22-20	2,490	suspended
Commonwealth Consd. Gas, No. 3 Tulare Lake, Kings Co.	21-22-20	rig	rigging up
Armadillo Oil Co., No. 1 Tulare Lake, Kings Co.	32-22-20	1,760	suspended
Dudley Ridge Dev. Co., No. 1 Tulare Lake, Kings Co.	24-23-20	rig	suspended
Kettleman Pac. Oil Co., No. 1 Tulare Lake, Kings Co.	11-23-16	812	sd. sh. drilling
Weiler, Carl, No. 1 Tulare Lake, Kings Co.	11-23-16	1,450	suspended
Mastadon Oil Co., No. 1 Tulare Lake, Kings Co.	27-24-22	rig	suspended
Trico Oil & Gas Co., No. 1 Atwell, Kings Co.	33-24-22	3,712	suspended
Trico Oil & Gas Co., No. 2 Atwell, Kings Co.	3-25-23	1,807	sd. sh. drilling
Buttes Oilfields Co., No. 2 Marysville, Sutter Co.	35-16-1	5,615	hd. sd. drilling
Milham Exploration Co., No. 2 Tracy, San Joaquin Co.	24- 2-4	1,120	sd. sh. drilling
Pure Oil Co., No. 1 Chowchilla, Madera Co.	7-10-14	7,775	sd. sh. drilling
Northern Counties Pe.., No. 1 Tehama, Tehama Co.	25-24-3	1,812	hd. sh. drilling

Haury-Burrton Connecting Well in Kansas Makes 2,294 Barrels in Its 24-Hour Potential Test

By JAMES McINTYRE

The past week was another quiet period in the Kansas Field, with only routine completions. Production remained down, and there was little new work started.

Derby Oil Co.'s No. 1 Ackley, which connected the Burrton and Haury Pools in eastern Reno County, made a potential production of 2,294 bbls. in 24 hours, and was the best completion of the week in the State.

Estimated Production

Estimated daily average production of Kansas in the week ending October 6 and for the preceding week follows:

	Barrels	
	Oct. 6	Sept. 29
Hollow	7,225	7,995
Ritz-Canton	10,750	12,210
Voshell	5,200	5,645
Johnson	1,775	1,860
Sedgwick County	7,225	7,175
Nikkel	5,350	5,545
Ellsworth County	2,076	2,756
Barton County	1,660	1,194
Rice County	12,168	12,153
Reno County	6,529	5,920
Ellis County	378	555
Kingman County	1,615	1,280
Stafford County	1,338	960
Russell County	6,650	7,250
Greenwood County	11,750	11,750
Butler County	19,500	19,550
Other pools	19,021	17,942
Total	130,200	132,160

Reno County

Skelly Oil Co. had a rig up for No. 1 Baumgartner, C NW NE Section 25-24-8w, Abbyville Pool, Reno County.

Barnsdall Oil Co.'s No. 5 Sabin B, NW NE NE Section 11-23-4w, Burrton Pool, Reno County, took a potential test and made 1,718 bbls. from Hunton at 3,602-10 feet. Same company's No. 1 Sabin A, SE SE NW Section 11-23-4w, which was reported as a completion last week, was later drilled 21 feet deeper and acidized in Hunton lime at 3,570-3,611 feet and made 1,712 bbls. in 24 hours in a new potential test It was re-completed.

Olson Drilling Co. and Shell Petroleum Corp.'s No. 2 Sabin B, C SW SW Section 13-23-4w, swabbed 12 bbls. of fluid per hour, only 5 per cent oil, and will be acidized in Hunton lime at 3,604-21 feet.

Derby Oil Co.'s No. 1 Ackley, NE NW SE Section 14-23-4w, also reported as a completion last week, was drilled 6 feet deeper in Hunton lime and given a new potential test. It flowed 2,294 bbls. of oil in 24 hours and was recompleted. This test connects the Haury and Burrton Pools.

Barnsdall Oil Co. has rig up for No. 2 Sabin C, SW NW SE Section 11-23-4w. Amerada Petroleum Corp. made a location for No. 1 Wilson, SE SW SW Section 23-23-4w.

Olson Drilling Co. and Shell Petroleum Corp.'s No. 3 Krehbiel, C NW NE Section 26-23-4w, was completed. It produced 225 bbls. of oil and water in 24 hours at 3,322-68 feet. Same operators' No. 2 Querfeld, SE cor. Section 27-23-4w, swabbed 22 bbls. of oil and 5 bbls. of water per hour for 24 hours, and will be acidized. It had Hunton lime at 3,595 to 3,604 feet, total depth.

Sinclair Prairie Oil Co.'s No. 1 Base A, C NE NE Section 36-23-4w, was acidized at 3,307-66 feet and flowed 160 bbls. in six hours.

Rex Petroleum Co. announces a location for No. 1 Cupps, SE SE NE Section 8-25-4w.

Harvey County

Mabee Consolidated Corp. and Shell Petroleum Corp. made a location for No. 2 Nikkell R, NW SW SW Section 8-22-3w, Hollow Pool, Harvey County.

Hollow and others completed their wildcat, No. 1 Summerfelt, NW NE NW Section 8-22-1w, which produced 247 bbls. of oil in 24 hours in a potential test. It produces from Hunton lime pays at 3,310-17 and 3,355-56 feet, which had been acidized.

The once busy Hollow Pool appears to be pretty well drilled up. One well being cleaned out and another testing with very poor initial showing, complete the list of unfinished wells in the field.

Greenwood County

Paulhamus, Skelly Oil Co. and Selby Oil & Gas Co.'s No. 2 Leedy, NW cor. SE Section 25-22-9, Greenwood County, is a 30-bbl. pumper of oil and water. It was completed.

Rice County

Torrey, Feaster & Co.'s No. 1 Brown (formerly reported Rogers and others'), NE NE NW Section 10-21-6w, Rice County, flowed 250 bbls. in 12 hours from chat at 3,376-3,419 feet.

Empire Oil & Refining Co.'s No. 1 Miller, SE NE SE Section 13-20-10w, was completed. It pumped 779 bbls. of oil and 20 bbls. of water in 24 hours from Siliceous lime at 3,342-46 feet. It had not been acidized.

The Texas Co. completed No. 5 West, SE NW NW Section 21-20-10w, in Siliceous lime at 3,331-41 feet. It made 972 bbls. in a 24-hour potential test, after an acid treatment.

Langston and others' wildcat, No. 1 Markle, NE NE SW Section 1-20-9w, was a 3,000,000-foot gasser in Kansas City lime at 2,868-85 feet, with the gas pay in the last 2 feet. The well was shut in.

Shell Petroleum Corp. acidized No. 1 McFarland, SE SE NW Section 7-20-9w, and it pumped 17 bbls. per hour.

Sinclair Prairie Oil Co. had ponds dug for No. 5 Thompson, SW NE NW Section 21-20-10w. Hipple and others made a location for No. 2 Brown, NW NW NE Section 10-21-6w.

McPherson County

Tom Palmer and Phillips Petroleum Co.'s No. 1 Moddelmog, NE NE NW Section 8-21-1w, McPherson County, which was a hole full of water from Siliceous lime at 3,559-96 feet, was abandoned as a failure.

Shell Petroleum Corp.'s No. 2 Hull, CSL SE SE SW Section 11-19-2w, swabbed 122 bbls. in 14 hours. It was then acidized.

Shell Petroleum Corp.'s No. 7 Giffin A, CNL NE NE NW Section 14-19-2w, was twice acidized but the best it could do was 254 bbls. in 24 hours after the first treatment. It was not completed.

Bob Younker and others have rig up for No. 2 Rolander, NE NW NW Section 30-18-2w.

Ellsworth County

Stanolind Oil & Gas Co. and Gypsy Oil Co.'s No. 1 Johnson, NE NE SE Section 21-16-10w, Ellsworth County, had 2,700 feet of oil in the hole from Siliceous lime at 3,318-22 feet, total depth.

Russell County

Indian Territory Illuminating Oil Co.'s No. 1 Driscoll, NE NE SW Section 21-13-14w, Russell County, was a hole full of water from Siliceous lime at 3,359-83 feet, and was abandoned.

E. K. Carey and others' No. 1 Schaffer, NW NW SW Section 27-13-14w, had 3,000 feet of oil in the hole from Siliceous lime at 3,268-75 feet, and was taking a potential.

Stanolind Oil & Gas Co.'s No. 3 Oswald, NW NE NW Section 8-12-15w, deepened from 3,024 feet to 3,259 feet and then plugged back to 3,155 feet was acidized and later completed as a 45-bbl. initial pumper, producing from Oswald lime at 3,143-55 feet.

Cowley County

Lewis Production Co. had a rig up for No. 1 Sitton estate, SW NE NW Section 29-31-6.

Chautauqua and Elk

Griffin & Bell were drilling at 385 feet in No. 9 Oliver, 660 feet from the west line and 990 feet from the south line of SE Section 1-32-10, Chautauqua County.

Superior Oil Co. made a location for No. 1 Rarick, NE SE SE Section 22-31-10, Elk County.

Bringer and others completed a 5-bbl. well in No. 1 Fleak, NE cor. SW Section 21-30-11, Elk County.

Clay Petroleum Co.'s No. 1 Smith, C SW NE Section 21-29-9, Elk County, was abandoned as dry at 2,825 feet. Osborne and others' No. 1 Marrs, SW NE Section 27-29-10, Elk County, was abandoned at 1,500 feet.

Sedgwick County

Gypsy Oil Co. and Buell's No. 1 Tammany, NW cor. NE Section 4-29-1w, Sedgwick County, was dry and abandoned at 3,952 feet.

Leo Keller and others had cellar dug for No. 1 Russell, SW SW NW Section 16-29-2. Aladdin Petroleum Co. and others made a location for No. 1 Seeley, SE SE NE Section 17-28-1, and Dickey Petroleum Co. was building rig for No. 4 Nolan, SE NE NE Section 20-28-1.

Lawrence Spencer and others' No. 1 Jacobs, SE cor. Section 22-25-1w, was completed. It pumped 75 bbls. of oil and 75 bbls. of water in a 24-hour test after having been acidized at 2,694-2,721 feet.

Solar Oil Co. and Skelly Oil Co.'s No. 17 Wilson, C SE NE Section 1-26-1w,

(Continued on Page 86)

Wildcat Operations in Kansas

Week Ending October 6

(Descriptions are East unless marked otherwise)

BARBER COUNTY

Lario O. & G. Co.'s No. 1 Whelan, C NW Sec. 32-31-11w.
Chat 4,355-4,435 ft.; P.B. to 4,380 ft.; pumped 231 bbls. oil and 180 bbls. water in 24 hrs.; will retest.

BARTON COUNTY

Gypsy Oil Co. and Atlantic Prod. Co. and Shell Pet. Corp.'s No. 1 Batchman, C SW NE Sec. 18-20-12w.
Siliceous lime 3,433 ft.; T.D. 3,518 ft.; water; S.D. for orders.

Murphin and Downing's No. 1 Lanterman, NW SE Sec. 15-19-11w.
Rigged up; S.D.

National Ref. Co.'s No. 1 Ingersoll, C NW NE Sec. 2-19-13w.
Lansing at 3,100 ft.; set 6-in. csg. 3,197 ft.; drlg. 3,314 ft.

C. L. Price et al's No. 1 Ehrlich, NW SE Sec. 10-16-13w.
Rig.

Walter Shearen et al's No. 1 Kempler, SE NE NE Sec. 21-18-11w.
S.D. 300 ft.

BUTLER COUNTY

Gaines et al's No. 1-A McKinley, NE SE Sec. 19-29-4.
Set 10-in. pipe 636 ft.; drlg. 660 ft.

Bill Rex et al's No. 1 DeMoss, NE NW Sec. 8-28-7.
Drlg. 2,225 ft.

F. H. Unruh et al's No. 1-A Joseph, SE SW NW Sec. 18-25-4e.
Rig.

CLAY COUNTY

Seidel Bros.' No. 1 Youkers, C S½ SE NW Sec. 21-9-4.
Set 8-in. 1,188 ft.; drlg. 1,252 ft.

Severs et al's No. 1 Meyers, NE NW NW Sec. 4-10-4.
T.D. 1,796 ft.; S.D.

COWLEY COUNTY

National Refining Co.'s No. 1 Robinson, NE SE NE Section 11-34-4.
T.D. 3,105 ft.; chat 3,084-3,105 ft.; recemented 5-in. csg.

Otstot et al's No. 1 Eckhardt, SE NW Sec. 15-35-6.
Spudded and S.D.

Wakefield et al's No. 1 Weigle, NW SE SE Sec. 6-32-6.
Drlg. 2,285 ft.

DICKINSON COUNTY

Dutch Oil Co.'s No. 1 Phillips, C NE NW Sec. 15-15-1e.
8-in. csg. 2,300 ft.; drlg. 2,475 ft.

ELLSWORTH COUNTY

Ainsworth Bros.' No. 1 Charvat, NE NW NE Sec. 32-15-10w.
Rigged up and S.D.

Lario Oil & Gas Co.'s No. 1 Harbalek, SW NW Sec. 7-16-10w.
Set 16-in. csg. 1,578 ft.; cleaning out.

GREENWOOD COUNTY

Greeley et al's No. 1 Satler, SW SE SW Sec. 28-25-12.
S.D. 335 ft.

HARVEY COUNTY

Hollow et al's No. 1 Summerfelt, NW NE NW Sec. 8-22-1w.
Hunton 3,310-55 ft.; acidized; potential 240 bbls.; completed.

Wenzel et al's No. 1 Schrag, NW SE Sec. 24-22-2w.
T.D. 587 ft.; S.D. for csg.

KINGMAN COUNTY

W. C. McBride, Inc.'s No. 1 Wolbridge, NW SE Sec. 16-27-7w.
Set 8-in. csg. on top of chat at 3,873 ft.; T.D.

McPHERSON COUNTY

C. W. Lamer et al's No. 1 Rolander, NE NE NW Sec. 8-18-2w.
Rig.

Roth-Farout et al's No. 1 Bestwater, SE SW SE Sec. 32-20-1w.
Rigged up and S.D.

Tom Palmer and Phillips Pet. Co.'s No. 1 Moddelmog, NE NE NW Sec. 8-21-1w.
Siliceous 3,559-96 ft.; water; abnd.

LINCOLN COUNTY

Dieter et al's No. 1 Herrington, NE NW SE Sec. 3-13-1w.
Rig.

OSAGE COUNTY

Jim Edwards' No. 1 Detrich, C NW SE Sec. 21-14-15.
Rig; S.D.

OSBORNE COUNTY

Carmen & Hershey's No. 1 Fritz, C NE NE Sec. 9-16-14w.
T.D. 1,272 ft.; U.R. 12-in. csg.

RENO COUNTY

Foraker et al's No. 1 Hiett, SE SW NE Sec. 34-24-4w.
Spudded.

McBride et al's No. 1 Popp, SW SW NE Sec. 32-24-4w.
Set 15-in. pipe 248 ft.

Privett Drlg. Co.'s No. 1 Crotts, NE NW NE Sec. 27-26-10w.
Set 12-in. csg. 1,129 ft.; drlg. 1,370 ft.

RICE COUNTY

Darby Pet. Co. et al's No. 1 Taylor, NW SE SW Sec. 25-19-8w.
Set 8-in. csg. 3,018 ft.

Deitrick et al's No. 1 Fitzpatrick, C NE NE Sec. 36-21-8w.
Viola lime 3,535-65 ft.; U.R. 5-in. csg.; T.D. 3,577 ft.; drlg. 3,204 ft.

Foraker, Nickerson et al's No. 1 Lyon, SE NW Sec. 27-20-8w.
Spudded and S.D.

Marathon Oil Co.'s No. 1 Kline, SW SE Sec. 19-14-24w.
Set 10-in. 3,408 ft.; drlg. 3,755 ft.

Robberson et al's No. 1 Johnson, NW NW SW Sec. 22-19-8w.
Old well deepening; T.D. 3,591 ft.; tools stuck; abd.

Stark & Wells' No. 1 Smith, NW cor. Sec. 30-19-8w.
Location.

Twin Drlg. Co. et al's No. 1 Rolfs, SW NW SW Sec. 13-17-9w.
Bldg. rig.

Langston et al's No. 1 Markle, NE SW Sec 1-20-9w.
3,000,000 ft. gas at 2,883-85 ft.; S.D. for orders.

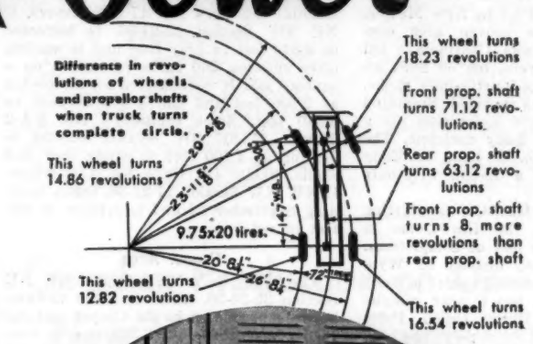
Yingling et al's No. 1 Maupin, NW SW SW Sec. 1-18-8w.
T.D. 2,430 ft.; fishing for tools.

(Continued on Page 81)

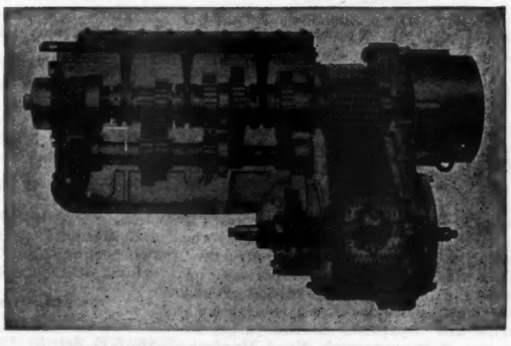
Controlled Power

Why a Center Differential is Necessary in a Four-Wheel Drive Truck

The necessity of a center differential in a four-wheel-drive truck can be easily demonstrated. Run the truck in a semicircle with the differential locked (this eliminates differential action) and then jack up one of the wheels. The strains that are built up because of the unequal distance traveled by the front and rear axles will cause the wheel to kick back as much as eight inches. When the truck is driven in a circle with free differential action between the axles, the wheels may be jacked up and no strain on the driving mechanism will be shown.


Difference in revolutions of wheels and propellor shafts when truck turns complete circle.
This wheel turns 14.86 revolutions
This wheel turns 18.23 revolutions
Front prop. shaft turns 71.12 revolutions.
Rear prop. shaft turns 63.12 revolutions
Front prop. shaft turns 8. more revolutions than rear prop. shaft
This wheel turns 16.54 revolutions
This wheel turns 12.82 revolutions
9.75x20 tires.
20'-8"
26'-8"
72"

The power in the FWD is controlled. No slippage of the wheels when turning corners. No strain on the mechanism. The FWD center differential, through which the power is fed from the transmission to both axles, does away with the wear and strain which would otherwise take place. A center differential in a four-wheel-drive truck is just as necessary and operates on the same principle as the differential in the rear axle of your pleasure car. When the condition of the road is so unusual that one of the axles loses traction, it is only necessary to flip a lever, which is operated from the driver's seat, to give positive drive to both axles.



X-RAY VIEW OF FIVE-SPEED TRANSMISSION SHOWING CENTER DIFFERENTIAL

FWD TRUCKS

BACKED BY NATION-WIDE SERVICE

THE FOUR WHEEL DRIVE AUTO COMPANY, Clintonville, Wisconsin
Canadian Factory: Kitchener, Ontario

- ☐ FWD Six Wheeler ☐ Use of Extreme Pressure Lubricants
- ☐ Size and Weight Restrictions of Every State in U. S.
- ☐ Report by Purdue University Regarding Efficiency Test
- ☐ Reasons for the Legal Recognition of the Six Wheel Truck.

Mr._____ Title_____

Address_____

City_____ State_____

Eunice Area, N. M., Is Extended Quarter Mile; Two New Tests Started on Iles Dome, Colo.

By TOLBERT R. INGRAM
Staff Correspondent, Rocky Mountain Area

DENVER, Colo., Oct. 8.—One completion in the Eunice Pool in New Mexico, which extended the proven area one-fourth of a mile, was Continental Oil Co.'s No. 8-B-1 Meyers, for 50 bbls. an hour through a three-fourths-inch choke. One new location was reported. Stanolind Oil & Gas Co. staked a location for a wildcat on the Big Eddy anticline. The Skelly Oil Co.'s No. 1 Lea, in Eddy County, showed for a 15-bbl. well only to run into water.

Stanolind Oil & Gas Co. is starting two new wells on the Iles Dome in Colorado. That state had no completions.

The Byron-Garland district in Wyoming is showing considerable activity where Ohio Oil Co. has a near completion in its No. 2 Byron Union, Peter Evanoff is spudding in a deep test and Taylor Oil Co. is coring near the top of the first objective. Earl W. Reeder, Inc., is digging cellar for rotary test on the Overland Dome 1,000 feet west of its No. 1 Union Pacific.

One completion and two new locations were reported in the Cut Bank Field and one oil well and one gas well were completed in the Kevin-Sunburst Field in Montana. One new location and one completion were reported in the Bowdoin gas field.

Utah has an interesting test in Washinton County in Escalante Explorations, Inc.'s No. 2 on the Bloomington Dome, which is coring an oil sand.

NEW MEXICO

Eunice Area

One completion and one new location were reported in the Eunice area in Lea County. Continental Oil Co.'s No. 8-B-1 Meyers, C SE NW Section 8-21-36, an outside well on the northwestern edge of the development, was completed at 3,878 feet in lime with an initial production of 50 bbls. an hour through a three-fourths-inch choke with 1,038,000 feet of gas a day. It was not given an open test through the casing. The 2½-inch tubing is at 3,874 feet. This location is 1,320 feet north of Continental's No. 8-A-1 Meyers, which was completed lsat May at 3,875 feet for 24 bbls. an hour before treating with acid and 152 bbls. an hour after treatment. It is also 1,320 feet west of Tidal Oil Co.'s No. 1 State, which was completed in November, 1932, at 3,985 feet for 524 bbls. first 24 hours.

The new location is Atlantic Oil Co.'s No. 1-F State, C SW SW Section 29-21-36, half a mile southeast of Texas Co.'s No. 1 Rector.

An important test nearing completion is Ohio Oil Co.'s No. 2 State-McDonald, C NW SW Section 14-22-36, 5 miles to the southeast of the main development, and between the Eunice and Cooper Pools. It is coring in a highly saturated sand at 4,258 feet. At 4,200 feet it stopped for a drill stem test and at 4,064-4,200 feet it showed a little gas and 3,000 feet of oil and water. It was then tested at 4,160-4,200 feet and showed 2,900 feet of fluid, of which 95 per cent was sulphur water. It then resumed drilling and picked up the highly saturated horizon.

Humble Oil & Refining Co.'s No. 1-B State, C SW NW Section 29-21-36, is rigging up rotary, and Gypsy Oil Co.'s No. 2 Bell-Ramsey, C SW NW Section 9-21-36, is rigging up rotary. Shell-Devonian's No. 1 State, C SW NE Section 20-21-36, is drilling at 3,917 feet in lime, and Tide Water Oil Co.'s No. 3 Coleman, C NE NE Section 17-21-36, is drilling at 3,531 feet in gray lime. Continental Oil Co.'s No. 17-A-4 Meyers, C NE SW Section 17-21-36, is bottomed at 3,846 feet in gray lime and is waiting after running 200 sacks of cement on a squeeze job. It encountered an air pocket at 2,100 feet and had a gas blowout ta 3,840 feet. Same company's No. 8-A-2 Meyers, C SE SW Section 8-21-36, is drilling at 1,100 feet in sandy lime and shells. Skelly Oil Co.'s No. 1 Coleman, C NW NW Section 17-21-36, began spudding September 24 and is drilling at 385 feet in red beds.

Cooper Area

The Texas Co.'s No. 1 Ogg, C SW NE Section 35-24-36, which is about midway between producers in the Cooper and Jal Pools, is bottomed at 3,370 feet in lime where it made a test which showed dry gas. It is preparing to drill deeper. The Humble Oil & Refining Co.'s No. 1 Thomas, C SW SE Section 23-24-36, is drilling at 3,411 feet in lime, and its No. 1 Coats, C NW NE Section 10-24-36, is bottomed at 3,039 feet and fishing for drill stem at 3,020 feet. Phillips Petroleum Co.'s No. 5 Woolworth, C NE NE Section 27-24-36, is bottomed at 3,155 feet and waiting after cementing the 9⅝-inch at 3,144 feet with 600 sacks. Same company's No. 7 Woolworth, C SE SW Section 23-24-36, is bottomed at 2,907 feet in brown lime and waiting after cementing the 7-inch at 2,900 feet with 300 sacks. Phillips' No. 8 Woolworth, C SW SE Section 22-24-36, is drilling at 2,690 feet in salt and shells. Gypsy Oil Co.'s No. 1 Cooper, C SW NE Section 23-24-36, is waiting after cementing the 13⅜-inch on bottom at 300 feet with 250 sacks, and its No. 2 Cooper, C NW SE Section 22-24-36, is building rig. Continental Oil Co.'s No. 23-A-1 Gates, C NE NW Section 23-24-36, is building rig.

Big Eddy Area

Stanolind Oil & Gas Co. has staked a location for its No. 1 Duncan, CEL SE SW Section 3021-30, in western Lea County on the Big Eddy anticline, 5 miles northeast of a test drilled several years ago which was abandoned as a dry hole at 3,260 feet.

Jal Area

E. B. Guess' No. 1-B Justis, SW NW NW Section 20-25-37, Jal area, is rigging up spudder. Texas Co.'s No. 2-B Shepard, NW NE SE Section 6-26-37, is rigging up rotary. Empire Gas & Fuel Co.'s No. 2-B Lindley, NE cor. SW Section 13-25-36, topped the brown lime at 2,770 feet and is drilling at 2,875 feet in lime. Repollo Oil Co.'s No. 1 Hanagan, SE cor. SW Section 12-25-36, had a show of gas at 3,085-95 feet and is drilling at 3,100 feet in lime, and its No. 1 Gloyd, SW cor. SE Section 12-25-36, is drilling at 212 feet in red beds. Continental Oil Co.'s No. 12-A-2 Wells, C NW NE Section 12-25-36, is straightening crooked hole at 135 feet.

Lea Area

The Texas Co.'s No. 1 Elliott, C NE NE Section 22-20-34, is rigging up rotary and its No. 1 Swearingen, C NE SW Section 8-20-34, is building rig. Same company's No. 4-A Lynch, C SE NE Section 34-20-34, is drilling at 500 feet in red beds.

Hobbs Area

Shell Petroleum Corp.'s No. 1 Sanger, SW cor. Section 27-18-38, is drilling at 4,055 feet in lime, and its No. 1-D State, SE cor. NW Section 34-18-37, was deepened to 4,260 feet and is standing treated with acid. It gauged 15 bbls. an hour at 4,110 feet. Oil Well Drilling Co. and others' No. 1 Grimes, SW NE SE Section 20-18-38, has completed cellar and pits, and Gypsy Oil Co.'s No. 4 East Grimes, C NE NE Section 33-18-38, is rigging up rotary.

Maljamar Area

Maljamar Oil & Gas Co.'s No. 4 Baish, NE SE NE Section 21-17-32, is drilling at 50 feet in red rock.

Eddy County

Skelly Oil Co.'s No. 1 Lea, C NW NW Section 23-17-31, Maljamar area, showed for a 15-bbl. flowing well at 3,821 feet and ran into water at 3,874 feet, making 24 bbls. a day. It is trying to shut off the water and test.

The two tests north of the Artesia Pool continue to attract attention, although little change has taken place. Tignor, Etz & Keyes' No. 1-A Keyes, C SE SW Section 10-17-28, is drilling at 1,917 feet with 1,500 feet of oil in the hole and Etz, Hammond & Keyes' No. 1 State, C SE SE Section 16-17-28, is cleaning out after a shot at 1,959 feet, total depth.

San Miguel County

Cabra Springs Oil & Gas Co.'s No. 1, SW NE NE Section 22-12-22, Pino Mesa, is fishing for tools at 3,803 feet, and its No. 2 CWL Section 19-12-22, is spudding at 79 feet. Deason and others' No. 1, SE SW Section 14-15-16, Romeroville district, is spudding at 253 feet.

COLORADO

Moffat County

Stanolind Oil & Gas Co.'s No. 22-SD Shaw, NW SE NW Section 27-4n-92, is a new location, and its No. 14-SD Parkinson, S NE SW Section 22-4n-92, is rigged and ready to spud.

Mountain Fuel Supply Co.'s No. 4-B Florence Wilson, C NE NW Section 23-12-100, Hiawatha Dome, is shut down indefinitely after plugging back from 3,797 feet to an oil sand at 2,337 feet. The sand at 2,304-37 feet, which flowed 24 bbls. in 26 hours in a former test, is believed to be the same horizon as the second gas sand on top of the structure. This sand shows a little oil in most of the wells and it is estimated that around 5,000 bbls. have been recovered through drips and separators in the past year or two. Same company's No. 1 Murdock, SE cor. NE Section 24-12-101, is shut down after completing rig. The Texas Co.'s No. 1 Van Schaick, SW cor. Section 19-12-100, is cementing the 8¼-inch on bottom at 2,100 feet.

Boulder County

Leslie R. Steele's No. 1 Cole, NW cor. NE Section 33-1n-70, Parallel Dome, is drilling at 2,330 feet.

Routt County

The Texas Co.'s No. 8 Quaintance-Hocking, NE SW NE Section 18-6n-86, Tow Creek, set the 10¾-inch at 1,510 feet and is drilling at 1,565 feet.

Grand County

Colorado Oil Refining Co.'s No. 1 Linke, NE SW SW Section 13-1n-77, Grandby district, is shut down at 1,700 feet where it is having trouble with cavey ground. Plans are being considered for installing heavier equipment to go deeper, probably to the Dakota. At present depth hole is making sufficient gas to burn in a steady flame 10 feet above the casing. Gas shows have been in evidence for the past 1,000 feet and have continued to increase with depth.

Jackson County

Continental Oil Co.'s No. 3 Hoye, NW cor. NE Section 34-9n-78, South McCallum, is drilling at 2,217 feet in lime and shale and sandy lime. Colorado Oil Refining Co.'s No. 1 North Park Coal Co., NW cor. Section 18-9n-78, North McCallum, is shut down at 1,801 feet until spring.

Lincoln County

Consolidated Smelting & Metals Co.'s No. 1 Hancock, NW cor. SE Section 7-17-52, Haswell district, has derrick up. It will be drilled with rotary.

Adams County

Riddle Petroleum Co.'s No. 1 Baxter, C SW Section 2-3s-66, Derby district, is waiting for tools and preparing to drill water wells.

El Paso County

Colorado Springs Oil & Natural Gas Co.'s No. 2 Carson, NW NE NE Section 10-16-66, Fountain district, is shut down at 2,504 feet.

Archuleta County

Navajo Oil Co.'s No. 1 Crowley, SW cor. NE Section 11-32-1e, Chromo district, pulled the 10-inch from 310 feet and is straightreaming at 340 feet. It had a show of gas in the top of the Dakota followed by water. It will continue to the Lakota. Oil City Petroleum Co.'s No. 2-X Garnett, Lot 3, SW Section 25-33-1e, Price district, is drilling at 514 feet after going through 501 feet of gravel. Supplies have been moved in for winter operations.

Prowers County

Trojan Oil & Gas Co.'s No. 1 Lotus Oil, NW NE NE Section 15-23-46, Lamar district, lowered the 6⅝-inch from 3,664 feet to 3,795 feet and is drilling at 3,833 feet.

WYOMING

Albany County

California Co.'s No. 1 Holst, NE SE SE Section 13-17-77, Quealy Dome, is drilling at 1,100 feet.

Big Horn County

Ohio Oil Co.'s No. 2 Byron Union, C SE NE Section 22-56-97, Byron Dome, is coring at 5,300 feet and is reported to have cut around 150 feet of oil saturation. It is one-third of a mile south of its No. 1 Byron Union which made 600 bbls. at 5,514 feet when completed in 1926. W. O. Taylor and others' No. 1 Hoskins, SE SE Section 25-56-97, is drilling at 5,275 feet and is about on top of the Embar. Crosby & Huntington's No. 1 Denio, Tract 43-C, Section 15-55-97, is drilling at 1,200 feet.

Peter Evanoff and others' No. 1 Griffin, Lot 60, Section 4-55-97, Garland Dome, is spudding. S. H. Keoughan has the contract. This test is on patented ground and not a government permit. It was erroneously stated in this column recently that Secretary Ickes had granted permission to drill this test to the Embar-Tensleep, but not to the Madison lime. This permit, we are informed, was issued by Pierre La Fleishe, Wyoming state oil and gas inspector, and not Secretary Ickes. The well is located outside of the unitized area, but is believed to be well within the productive contour.

Secretary Ickes, as petroleum administrator, approved the temporary development plan submitted by the operators party to the unit agreement.

J. W. Bales' No. 1 Parker, C SW SW Section 23-49-89, Ziesman Dome, a test to the Madison at 800 feet, is drilling at 150 feet.

Jerome Drumheller's No. 1 Martin, SW SE NE Section 17-49-91, Manderson Dome, is spudding at 150 feet. Several tests drilled on this structure a few years ago had shows of oil and gas at around 1,400 feet, but the Dakota at around 2,000 feet carried water. The lower formations have never been drilled.

Carbon County

Earl W. Reeder, Inc.'s No. 1 Union Pacific, C SW SW Section 19-20-83, Overland Dome, is drilling at 5,590 feet. This well has had several shows of oil and gas in upper horizons, one of which was estimated at 200 to 500 bbls. a day. The company has made a location on the Whitford permit in the SW SE SE Section 24-20-84, about 1,000 feet to the west, and is digging cellar for rotary outfit.

Ohio Oil Co.'s No. 1 Morris, C NW SE Section 6-20-77, Diamond Dome, is drilling at 2,800 feet after running pipe and testing gas show in the Shannon at 1,980-2,240 feet. Argo Oil Co.'s No. 1 Government, NE cor. SE Section 5-24-87, O'Brien Springs, is building derrick and laying water lines.

Fremont County

Mid-American Oil Co.'s No. 1 Government, NE SW Section 4-28-92, Sheep Creek, is drilling at 2,500 feet. Monongahela Oil Co.'s No. 1 Jones, NW cor. Section 7-28-92, Spring Creek, is shut down at 1,136 feet. Gas in first sand was not sufficient to furnish fuel for rotary test on Crook's Gap structure and it was decided to go ahead with the last named without waiting for the Jones well to be drilled to the second sand. It will be deepened to the second sand at 1,240 feet later. Its No. 1 Wisda, NE SE SE Section 13-28-93, Crook's Gap, is resuming at 2,790 feet.

Hot Springs County

California Exploration Co.'s No. 1 Government, NE SE NE Section 12-44-97, Waugh Dome, is drilling at 2,500 feet. First objective is expected at 4,400 feet.

Park County

Val M. Kirk's No. 2 Kirk, SE SW SW Section 24-58-98, Frannie Dome, is drilling at 2,700 feet.

Sublet County

Calmonica Petroleum Co.'s No. 17-3 Elkhorn, NW cor. NE Section 17-27-113, La Barge district, is drilling at 1,700 feet. Piney-La Barge Oil Co.'s No. 2, NE NW Section 18-28-113, Dry Piney, is drilling at 520 feet.

Uinta County

General Petroleum Corp. of Utah's No. 1 Hayes-U.P., SW NW SW Section 29-14-118, Spring Valley district, is drilling at 840 feet where it has a show of gas.

Weston County

Conway Oil Corp.'s No. 1 Government, C SE NW Section 7-41-60 (corrected location) is shut down at 590 feet and preparing to run the 12½-inch to shut off an enormous flow of fresh water from the Lakota. Ranchmen in the vicinity are anxious to have the water saved for irrigation purposes and are trying to make arrangements to that effect.

MONTANA

Glacier County

One completion and two new locations were reported in the Cut Bank Field. Consolidated Gas Co.'s No. 2 Ewing, SE SE Section 34-35-6w, was completed at 2,951 feet, oil rising 2,150 feet in the hole from the pay at 2,935-47 feet. The 8¼-inch was cemented at 2,902 feet with 50 sacks. The two new locations are Consolidated Gas Co.'s No. 1 Tribal, Lot 5 (NE NE) Section 34-35-6w, and No. 2 Tribal, Lot 6 (SE NE) Section 34, both of which are digging cellars.

Fisk and others' No. 1 Harper, C NE NE Section 21-34-6w, is drilling at 210 feet, and Lon Crumley's No. 1 Jones, C NW SE Section 31-34-5w, is drilling at 2,500 feet.

Dakota-Montana Oil Co.'s No. 2 Winkler, W NE NW Section 26-35-6w, is a suspended location until spring.

Fulton and Nadeau's No. 2 Haggerty, C NW NW Section 15-34-6w, had a show of oil at 2,992 feet and stopped to set the 7-inch at that depth with 50 sacks.

Hannah-Porter Co.'s No. 2 Britton, SW NE NE Section 23-34-6w, topped the Colorado at 510 feet and cemented the 10-inch on bottom at 550 feet with 50 sacks.

Indian Oil Co.'s No. 1 Reickhoff, SW SE Section 3-34-6w, is drilling at 1,250 feet, and its No. 2 Winkler, W SW SW Section 23-35-6w, is fishing at 2,585 feet.

R. C. Jeffries' No. 1 Lukens, C SE SE Section 1-33-6w, is drilling at 505 feet.

Lawler & Hoer's No. 2 Harland, C NW NW Section 8-33-5w, is drilling at 1,040 feet.

Montana Headlight Oil Co.'s No. 3 Yunck, W SW SW Section 1-34-6w, is drilling at 2,240 feet. Montana Power Gas Co.'s No. 1 De Zort, 700 feet north of CSL Section 23-35-5w, is drilling up bailer at 2,715 feet, and its No. 1 Gaines, C NW NE Section 6-33-5w, is spudding at 165 feet. Same company's No. 1 Sheuren, C SW SW Section 21-33-5w, is drilling at 2,025 feet.

Olive Oil Co.'s No. 2 Winkler, W NW NE Section 35-35-6w, is drilling at 1,910 feet, and its No. 3 Winkler, W NE NW Section 35-35-6w, has rig on location.

Santa Rita Oil & Gas Co.'s No. 4 Cardwell, NE NE Section 22-35-6w, is drilling at 2,275 feet, and its No. 4 Tribal, C N half SW Section 15-35-6w, is drilling by tools at 2,250 feet, total depth.

R. C. Tarrant's No. 2 Getty, NW cor. SE Section 2-34-6w, is drilling by tools at 2,700 feet, total depth, and his No. 5 Haglund, Jr., C SW NE Section 13-34-5w, cemented the 10-inch on bottom at 503 feet with 50 sacks. Tarrant's No. 3 Miller, E NE NE Section 24-34-6w, is spudding at 165 feet, and his No. 1 State, C SE NE Section 36-34-6w, is drilling up bailer at 2,655 feet. The Texas Co.'s No. 1 State, C SE NE Section 36-34-6w, is running the 7-inch at 2,852 feet, and its No. 1 Hessler, set the 7-inch at 2,959 feet and is drilling at 2,971 feet. Same company's No. 1 Jones, C NE NE Section 6-33-5w, is preparing to run the 10¾-inch at 290 feet, and its No. 5 Purdy, NE NW NW Section 35-35-6w, is shut down at 300 feet.

Watson and others' No. 1 Simero, NE SW NE Section 1-33-6w, is drilling at 1,640 feet.

Stillwater County

Continental Oil Co.'s No. 1 Orr, SW NW SE Section 18-5s-17, Dean-Ingersoll, set the 12½-inch at 232 feet and is drilling at 800 feet.

Petroleum County

Guy Smith's No. 1-AM SE cor. Section 3-13-26, Flatwillow district, was abandoned at 2,200 feet, and another well is being started 1½ miles to the northwest.

Toole County

T. P. Kyle and others' No. 1 Clark, SW cor. SE Section 19-37-1e, Bow and Arrow structure, is rigged and ready to spud.

Two completions were reported in the Kevin-Sunburst Field. Engelking & Pfabe's No. 6 Seabrook, C NW NE Section 30-35-2w, which had a show of oil at 1,524 feet, total depth, was completed for 50 bbls. initial after being treated with acid. Potlach Oil & Gas Co.'s No. 4 fee, S SE SE Section 21-34-1w, was completed in the Sunburst at 1,200 feet for 1,500,000 feet of gas.

Frank & Miller's No. 3 State, NW SE Section 36-34-1w, is shut down at 350 feet, and E. R. McKee's No. 8 fee, N NW SW Section 19-35-1w, is drilling in at 1,500 feet. Bi-State Oil Co.'s No. 3 Haemel, E SE NE Section 3-34-1w, is drilling at 1,075 feet, and A. Beardsley's No. 3 Swears, C SE NW Section 9-35-2w, is drilling at 1,000 feet.

Big Horn County

Enterprise Oil Co. and others' No. 2 Lynde, SW cor. SE Section 21-6s-35, Lodge Grass Creek, resumed recently at 3,580 feet and is drilling at 3,605 feet with a show of oil. It is below the Dakota.

Teton County

Ned Cheadle and others' No. 1 Balsinger, NE SE NW Section 20-27-5w, West Pondera, set the 5⅞-inch at 2,368 feet and is drilling below 2,379 feet.

Phillips County

The town of Saco's No. 1 fee, SE cor. Section 7-31-34, Bowdoin gas field, was completed at 800 feet for 500,000 feet per day. Bowdoin Gas Utilities Co.'s No. 528, C SW NE Section 23-31-34, is rigging up, and its No. 527, C SE NE Section 14-31-34, is drilling at 755 feet. The British-American Syndicate's No. 1 Hedges, NW NE Section 17-32-33, is drilling at 400 feet.

Liberty County

J. H. Hamilton and others' No. 1 Northern Farms, C NE SW Section 10-37-5e, Flat Coulee, is drilling at 1,800 feet.

Carbon County

Ohio Oil Co.'s No. 14 Maddox, C NW NW Section 10-7-21, Dry Creek, is coring at 6,002 feet in rainbow shales between the Dakota and Lakota.

UTAH

Escalante Explorations, Inc.'s No. 2 Escalante, NW cor. NE Section 19-43-15, Bloomington district, Washington County, is coring in oil sand below 4,100 feet. Diamond Oil Co.'s No. 4, S SE NW Section 16-8s-5e, Utah County, is showing gas at 3,571 feet and working on a water shutoff at 3,550 feet. Mountain Fuel Supply Co.'s No. 2 Murphy, NE NE Section 21-3n-24, Clay Basin, Daggett County, is coring at 5,463 feet in the Frontier.

Canadian Production on Upward Trend; New Wildcats in Southwest Alberta

By VICTOR LAURISTON

Staff Correspondent, Canadian Fields

CHATHAM, Ontario, Oct. 6.—Official figures from Alberta for August show a total of 101,011 bbls. of water-free oil, compared with 108,115 bbls. in July. The latter figure, however, included 8,199 bbls. omitted from the June total. Turner Valley naphtha was 95,519 bbls. in August compared with 95,080 bbls. in July; Turner Valley light crude increased from 1,391 to 1,555 bbls.; Red Coulee light crude was down from 1,798 to 1,531 bbls.; and Wainwright heavy crude increased from 1,647 to 1,896 bbls. In August a production of 510 bbls. was reported from the Skiff Field, which was unproductive in July. Handling losses from the Turner Valley production amounted to less than 2 per cent of the totals from that field.

Canadian Production Totals

Official figures of the Dominion Bureau of Statistics at Ottawa for July covering all Canadian fields show an upward trend, the total being 120,772 bbls., against 109,021 bbls. in June and 100,445 bbls. in July, 1933. For the seven months of 1934 the total was 837,393 bbls., against 633,634 bbls. in the same period of 1933.

South Turner Valley

In the Mar Jon Section, South Turner Valley Field, Century Royalties' No. 1, LSD 14, Section 28-18-2w5, has increased its crude naphtha recovery to around 175 bbls. a day, with interruptions three times a day to blow off drilling water.

In the same section, Publix Oil & Gas Co.'s No. 1, LSD 8, is at 4,910 feet with 8⅝-inch casing run to below 3,900 feet. About 2,000 feet of oil in the hole will have to be bailed before deepening to the limestone. Renfrew Royalties' No. 1, LSD 3, same section, has resumed from 1,800 feet after running 16-inch casing. Spooner Oils' No. 5 Anaconda, LSD 1, is in the poker chip shales below 5,425 feet. Carleton Royalties' No. 1, LSD 2, is below 4,400 feet. Pecalta Oils' No. 1, LSD 7, is moving rotary outfit which will be rigged up to deepen in the lime. Some light crude production from the upper horizons is being delivered to the British American Oil Co. refinery on the lease.

In the far south end of the field, Union Freehold Oil Corp.'s No. 1, LSD 8, Section 21-18-2w5, is redrilling below 4,320 feet. It cemented back from 4,585 feet to overcome caving. Highwood Royalties' No. 1 Oliver, LSD 3, same section, is below 2,460 feet. Myers & Wright's No. 2 Pacalta, LSD 14, is at 1,500 feet and waiting for casing. Bad roads have held up work on a number of wells recently.

On the east side, Northwest Co.'s No. 1 Calgary & Edmonton-Longview, LSD 5, Section 27-18-2w5, has been shot with 600 quarts. It struck the lime at 5,592 feet and was bottomed at 6,220 feet with a small wet gas flow and crude naphtha recovery around 21 bbls. a day. Results of the shot have not been determined. Farther north, Merland Oil Co.'s No. 2, LSD 13, same section, is rigged up. Cable tools are being used. The water well got the Benton formation at 185 feet, conforming with Merland's No. 1 producer. Nolan Hungerford Royalties' No. 1 Rand, LSD 5, Section 34-18-2w5, another test on the east side, is below 2,140 feet and logging closely with Merland's No. 1.

In the Central Turner Valley, New McDougall-Segur Oil Co.'s No. 7, Secíton 12-20-3w5, has encountered an oil show at 3,535 feet and is going deeper. The log shows a thickening of the formations in comparison with other light crude producers in this area.

Tests in the Foothills

In the forest reserve area west of Olds, Hunter Valley Oil Co.'s No. 1 McLaren,

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LSD 12, Section 13-31-10w5, is below 4,060 feet. It got a gas pocket at 3,250 feet and another show close to 4,000 feet but no oil shows. At the company's annual meeting last week at Calgary the following officers were re-elected: President, Campbell Hunter, O.B.E., London, England; vice president, R. J. McLaren, Calgary; directors, Mrs. W. M. Baird, London; Austin de B. Winter and Herbert Greenfield; secretary, Mrs. M. McKenzie, Calgary.

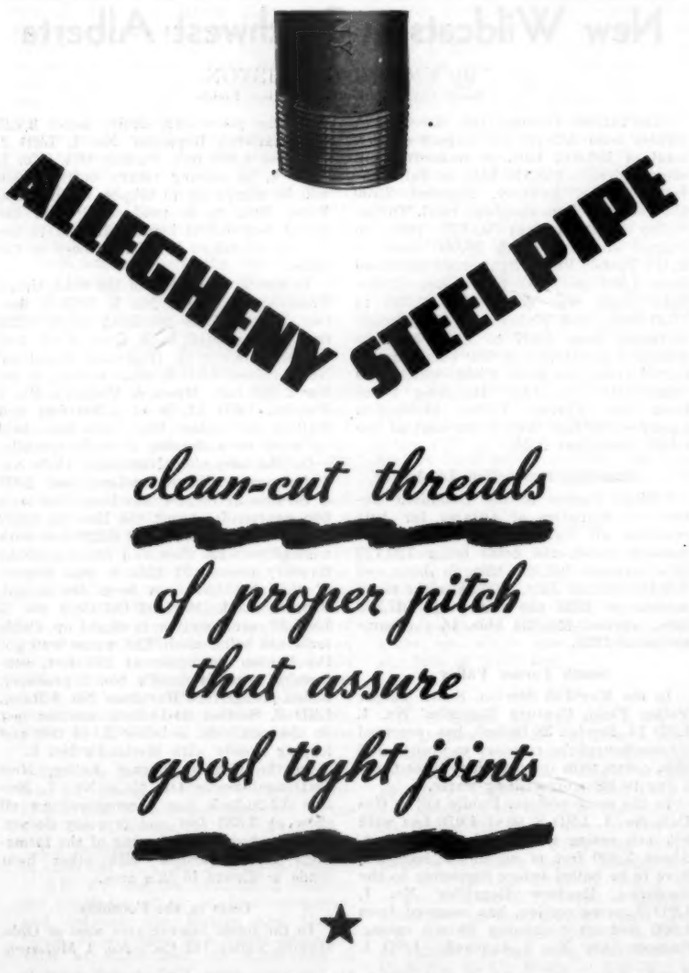
On the Watson structure, Raven Oils' No. 1, LSD 1, Section 20-9-20w5, has had some trouble with caving but is below 1,400 feet. Additional gas was struck around 1,000 feet. Mar Jon Oil Co.'s No. 3 Prairie, LSD 3, Section 4-10-2w5, is running daylight tour. On the same structure, a Pacific Coast syndicate represented by Messrs. Hunter and Winger is rigging in LSD 10, Section 20-9-2w5, north of Raven's No. 1.

On the Highwood-Sinclair structure, Canadian Royalties' No. 1 Banner, LSD 6, Section 34-17-3w5, is being put in shape for winter operation.

Border Fields

Two wildcats will be started this fall on the Del Bonita structure in southwestern Alberta. Terminal Oil Co.'s No. 1, NE Section 18-1-21w4, had derrick up and is moving equipment. Lloyd Clinch and associates of Vancouver, British Columbia, have located their No. 1 test in LSD 10, Section 19-1-21w4, three-quarters of a mile farther north and will spud within a few weeks. The Del Bonita structure lies west of the Twin River Field and 4 miles north of the boundary, being one of a series of folds lying between Twin River and the Cut Bank Field in Montana. It is a well defined structure and no serious drilling difficulties are anticipated. Multi-Structure Oil Holdings, Ltd., is interested in the acreage on which Clinch's No. 1 is located. The locations border on Shanks Lake and Alberta Pacific Consolidated Oils, Ltd., of Calgary holds a large block to the east.

On the Cardston structure, Franco Oils' No. 1, LSD 6, Section 5-3-25w4, is below 200 feet. The company holds some 8,000 acres between Aetna and a point 5 miles west of Cardston, No. 1 being in the Lees Creek Valley 3 miles southwest of Cardston. It is close to No. 1 Provincial Highway. The structure has been geologized at various times by Joseph D. Mackie, Jack Reynolds and Dr. F. F. Hintze. It is apparently the first fold east of the broken foothill structure and there is evidence of ample closure, with potential gas horizons above the Benton formation which is placed about 3,000 feet. Cardston Gas & Development Co. has secured a franchise to supply gas from the well to the town of Cardston. No. 1 is on a high point and is drilled with gas as the primary objective. If production is secured No. 2 will be drilled lower on the structure for oil. Gas is looked for in horizons corresponding to the Medicine Hat and Bow Island sands. Officers of the company are: President, J. S. Smith, Cardston; vice president and managing director, Walter F. Thorn, Moose Jaw, Saskatchewan; director and secretary-treasurer, B. Y. Williams, Cardston; directors, J. Y. Card, Rulon E. Hicken, Cardston; geologist, Dr. F. F. Hintze, Salt Lake City; superintendent, W. C. Thorn, Cardston; engineer, George Mackie, M.E.I.C., Moose Jaw.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Wainwright Field

In the Wainwright Field, east-central Alberta, Gold Standard Oils, Ltd., is continuing reconditioning operations in connection with the old producing wells. Production from six or seven old wells has been brought up to around 65 bbls. a day. The company's plant is equipped to handle about 100,000 bbls. of Wainwright crude annually. After reconditioning operations are completed, the company will undertake systematic new drilling, with a view to operating the plant entirely on the Wainwright crude.

In northern Alberta, Athadome Oils' No. 2, LSD 3, Section 15-66-23w4, 6½ miles west of Athabaska Landing, is being put in shape to take production from a sand at 1,650 feet. The company will install a small local refinery to handle the production from this and additional wells to be drilled.

Saskatchewan Tests

On the Dirt Hills structure, 50 miles southwest of Regina, Saskatchewan, Pine River Petroleums' No. 1, LSD 8, Section 23-12-24w2, has resumed from 4,220 feet after a shutdown due to bad weather. It is the deepest well in Saskatchewan. Pine River's No. 1, backed by the A. W. Dingman interests of Calgary, has encountered some gas, and is drilling in a limestone formation.

Blackfoot Oil & Gas Co.'s No. 1, Township 13-20w-2, is below 1,400 feet. Aladdin Oil & Gas Co.'s No. 1 at Pilot Butte is reported resuming. In the Simpson district, Simpson Oil Co.'s No. 2 is rigging.

Ontario Drilling

In the Eden Field, Norfolk County, Ontario, E. P. Rowe's No. 7 Mrs. Elwin Stilwell farm, is a small gasser. Mid-Wal Oil & Gas Co.'s No. 1, Lot 2, Concession 3, North Talbot Road, Middleton Township, about a half mile east of the Stilwell property, is rigged up. About a half mile east, Bay Sunda's No. 1, Lot 5, Concession 3, is drilling. On the John Anderson property, Gore Lot 27, Concession 9, Bayham Township, three locations have been made by Charles Simpson of Simcoe and L. H. Shafer of Delhi.

In the Dawn Field, Lambton County, Union Gas Co.'s No. 78, NW Lot 29, Concession 11, Dawn Township, is below 400 feet. Union's No. 34 Moorehouse, Lot 25, Concession 5, Euphemia Township, is deepening below 1,800 feet with practically no additional production. In Moore Township, American Engineering Co.'s No. 4, I. C. Kerr farm, Lot 21, Concession 1, is below 400 feet.

In the Dover Field, Kent County, F. H. Stover & Sons' No. 2, Sam Antaya farm, is below 900 feet. Ajax Oil & Gas Co.'s No. 9, Johnston farm, is below 700 feet.

In Raleigh Township, Kent County, Gas Producers Syndicate, backed by Detroit capital, is starting No. 1 test on the Gilbert Pardo lease, north of the DeClute Field and south of the Olga gassers. F. H. Stover & Son have the contract. Ladd & Ziegen's No. 1, Guy Mifflin farm, S. Lot 7, Concession 14, Tilbury East Township, is below 700 feet.

In the Haldimand fields, a local syndicate has finished a test on the David Hunter farm in Oneida Township, near Caledonia, with a flow of 150,000 feet a day. Empire Natural Gas Co.'s No. 10 in the Nanticoke area has finished with around 90,000 feet a day. Empire's No. 9 on the Vokes lease is nearing completion and No. 11 has been spotted.

Kettle Point Prospect

In Lambton County, Ontario, an agreement has been made by White Oil & Gas Co. of Sarnia and Fred H. Merritt, petroleum engineer, of Duluth, Minn., for testing the Kettle Point and Stony Point Indian Reserves on Lake Huron for oil and gas. The geological features of the area are summed up by Mr. Merritt as follows. "On the surface, at Kettle Point, is exposed the base of Antrim shale of Michigan, lying on or contacting the upper Traverse lime, with a southwesterly regional dip of some 25 to 35 feet a mile, identical with the exposures at Alpena, across the state of Michigan to Petoskey. In Michigan, the regional southerly dip continues to the Midland Basin, where the Dow Chemical Co. utilizes the heavily charged mineral brine; and from this regional syncline the formations rise gradually into Ohio and Indiana.

"In the Sarnia district of Ontario, the formations dip to the southwestward, from Manitoulin Island to approximately Blue Point, gradually rising through Essex County into Ohio. The axis or trend of this regional syncline comes into Michigan from Wisconsin, at a point 10 miles north of Muskegon, declining into the Midland Basin, thence gradually rising past a point about 35 miles north of Port Huron, thence more southerly to the Canadian shore near Blue Point, continuing southeasterly, slightly north of Glencoe, where it begins to dip faster toward the Titusville and Bradford areas of Pennsylvania."

It is planned to drill at least one deep test in the Kettle Point area, which is some miles north of the Petrolia shallow field. No deep drilling has yet been done in this area.

E. G. Seubert Says Labor Has Been Aided by Code

The oil code has been beneficial to labor in refineries but has not so far been equally helpful in solving management problems, Edward G. Seubert, president of Standard Oil Co., told the sixteenth annual conference of employe representatives.

The statement concluded a day of discussion of industrial relations problems by 100 representatives from refineries at Whiting, Ind.; Wood River, Ill.; Sugar Creek, Mo.; Neodesha, Kans., and Greybull and Casper, Wyo.; and the general office at Chicago.

The company is employing 14 per cent more men in its refineries than before the code was adopted and its total refinery payroll is greater, Mr. Seubert said. Price wars and other disturbing features of the marketing branch of the business have prevented realization of economic benefits from the code to offset its cost.

Mr. Seubert congratulated the employe representatives on the intelligence with which they had dealt with labor questions through a troubled year. Relations between management and men in Standard refineries are marked by exceptional understanding and mutual consideration, he declared, as the result of 16 years of close co-operation in settling labor problems on fair terms acceptable to both sides. Further liberalization of the company's industrial relations plan to meet with current ideas, especially in the matter of independent election of representatives, were announced.

I.P.A.A. DIRECTORS

A meeting of the executive committee of the board of directors of the Independent Petroleum Association of America and a meeting of the board of directors will be held Monday and Tuesday, October 22 and 23, at the Biltmore Hotel, in Oklahoma City.

TECHNICAL QUESTIONS ANSWERED

By Charles K. Francis, Ph. D., Technical Editor

This department of The Oil and Gas Journal is devoted to the manufacturing branches of the oil industry.

Those connected with the refining of crude petroleum, the manufacture of natural gasoline and closely allied industries are invited to submit their problems to Dr. C. K. Francis, technical editor. The department was created for the purpose of aiding managers, superintendents, engineers, chemists and all those engaged in the various phases of plant operation; also those connected with marketing and utilization of petroleum products.

Questions should be submitted in as much detail as possible.

Inquiries must be signed but only the given initials will be printed. The source of the question is considered to be confidential.

Questions requiring a discussion of patents, the use of intricate formulas, extended computations, or cost estimates cannot be considered.

When the matter is of general interest the reply will be published within a reasonable time.

Relation of Specific Gravity to Baume and A.P.I. Degrees

Will you give me an outline of the relation of specific gravity to Baume degrees and A.P.I. degrees? Suppose an oil tested 39.9° Be., what would it show A.P.I.?—R. N. E.

The A.P.I. modulus for hydrometer graduations is a special one for use by the petroleum industry in the United States. The relation to specific gravity is

$$\frac{141.5}{131.5+\text{A.P.I. degrees}} = \text{Specific gravity}$$

The Baume modulus is

$$\frac{140}{130 + \text{Be. degrees}} = \text{Specific gravity}$$

The difference at 20° Be. is 0.1° higher for A.P.I. degrees, and increases by 0.1° for each 10 degrees upward on the A.P.I. scale.

The equivalents are shown in the table.

GRAVITY BY DIFFERENT SYSTEMS

Sp. gr.	Be.	A.P.I.
1.000	10.0	10.0
0.9333	20 0	20.1
0.8755	29.9	30.1
0.8750	30.0	30.2
0.8240	39.9	40.2
0.8235	40.0	40.3
0.7782	49.9	50 3
0.7778	50 0	50.4
0.7372	59.9	60.4
0.7368	60.0	60.5
0.7000	70.0	70.6
0.6667	80.0	80.7
0.6364	90.0	90.8+
0.6087	100.0	100.9+

Complete tables for A.P.I. degrees are published in the National Standard Petroleum Oil Tables, Cir. No. 154, U. S. Bureau of Standards. This may be purchased for 30 cents from the Superintendent of Documents, Government Printing Office, Washington, D. C.

An extended discussion of the subject appeared on this page in the issue of September 24, 1931.

Sediment and Viscosity Values of Fuel Oils

Will the addition of a 300 viscosity at 100° F. oil, straight reduced, when added to a 1,400 cracked fuel oil cause the precipitation of carbon? Does 1,400 viscosity cracked fuel contain 5 to 12 per cent suspended carbon? Why does a high viscosity cracked fuel oil command a differential of 35 cents a barrel? —J. V. T.

Usually the heavy fuel oils are free from mineral or noncombustible sediment, such as may be found in some crude oils. The solid particles found in normal fuel oils are usually fluffy free carbon or finely divided coke. It is not a common practice to have carbon precipitated as the result of mixing two fuel oils. However, this might happen if two oils of considerable difference in gravity were mixed and does occur when gasoline is added to an asphaltic fuel oil. It would not be surprising to find 5 to 12 per cent carbon in suspension in a very heavy fuel oil, especially one made under some cracking conditions.

In many isntances the standard sediment test is eliminated from specifications for heavy high viscosity oils and a test substituted which requires the statement of insoluble residue after treating with benzol, followed by ignition of the residue. The meaning of this is that any solid residue shall be combustible and in this way metallic substances, earth and sand are eliminated.

The cracked fuel oils usually command a higher price because they are free from objectionable sediment, flow at very low temperatures because they are free from wax, and have a low sulphur content.

The Cupric Oxide Treatment for Desulphurizing Light Oils

Should the form in which the cupric oxide is used influence its treating properties? By that I mean, is the effectiveness of the oxide altered when used as a part of a slurry, or is it just as effective when used in the dry or solid form? Does it react on the vapors less efficiently if hydrogen sulphide is present in the treating chambers? Can you tell about how much in pounds per barrel ratio of the oxide is necessary for bringing a low-sulphur (one-half of 1 per cent) to a negative doctor test? How long can the same batch of chemical be used before it loses its power of thorough treating? How much of this contaminated material can be reclaimed or revivified for further use? We have heard that there is practically no wear-out to this chemical. Is that true?—W. F.

The treatment of petroleum oils with cupric oxide, for the reduction of sulphur compounds, originated with Herman Frasch when the high sulphur oils, with an objectionable odor, were first produced in the Lima district of Ohio and the adjacent territory in Canada. (Ind. Eng. Chem. 4, 131, 1912. U. S. Pats. 378,246; Feb. 21, 1888, and 448,480 March 17, 1891). There have been many investigations of the process since then and numerous patents have been issued to cover modifications. Frasch used the fine material or small lumps in the hot liquid, suspension being maintained by means of chain drags. The liquid charge was 1,200 bbls. requiring from 2.25 to 3.25 tons of the oxide. Later patents by Frasch provided for its use in the vapor phase.

Perkin discusses the early efforts made to remove sulphur from petroleum oils with cupric oxide in the J. Inst. Pet. Tech., 3, 226, 1916, stating that it was not satisfactory because of the large quantities required. Later studies showed that the material was not adapted to all oils; some oils were easily desulphurized, while other oils, such as Mexican and California oils, were but slightly affected.

It is now known that all light distillates are improved in odor and sweetened by treating with copper oxide. The simplest method for sweetening is to agitate the oxide in the hot liquid and then filter off the product.

Frasch suggested the use of litharge for the more volatile fractions and cupric oxide for the high boiling fractions. It is also recognized that the efficiency of the oxide depends on the porosity and surface exposed. Many patents have mentioned various inert materials for this purpose, such as cement, plaster of paris, pumice, coke, tile and iron oxide.

The resulting compound is copper sulphide. This may be converted to the oxide by roasting or by treating with superheated steam. There is very little loss when recovering.

The quantity of cupric oxide required to reduce the total sulphur content and to sweeten any oil will have to be determined by analysis and experiment. Hydrogen sulphide will readily combine with the copper and thus reduce the efficiency; consequently it should be first removed by the simple method of washing the liquid with a dilute solution of caustic soda. The time required to exhaust the reagent depends on the quantity of sulphur present.

The losses are those due to handling, so if this condition is good practically all of it will be revivified. It is practically indestructible under the conditions of petroleum refining.

Methods for the Inspection of Petroleum and Its Products

Kindly furnish the most up-to-date reference book giving laboratory procedure for examination and testing of all petroleum products, crudes, fuels, lubricating oils and greases.—B. R. B.

Reliable methods for the examination of petroleum and petroleum products are described in Federal Standard Stock Catalog (VV-L-791) Section 4, Federal Specification for Lubricants and Liquid Fuels; General Specifications (Methods for Sampling and Testing), obtainable upon the payment of 15 cents through the Superintendent of Documents, U. S. Government Printing Office, Washington, D. C.

The A.S.T.M. Standards on Petroleum Products and Lubricants, contains methods of testing, definitions, charts and tables, as prepared by Committee D-2 of the American Society for Testing Materials. Many of the methods described are the same as those given in the Federal Stock Catalog. This book of 292 pages may be purchased for $1.25 from the Society, Philadelphia, Pa. It is revised annually, usually issued in September.

Gum Content of Gasoline by the Oxygen Bomb Test

It has been our understanding that the minimum induction period in order to avoid gum trouble should be at least 230 minutes. What in your opinion is the minimum induction period? We have tested some gasolines in this territory with induction periods as low as 70 minutes. Where would gum trouble appear in the car?—E. L. A.

An excellent investigation of the gum content of gasoline was made by Voorhees and Eisinger, as reported before the American Petroleum Institute, at Chicago, December 3 to 6, 1928, page 152. The method described for the experiments on oxygen absorption included tests in which the samples of gasoline were placed in bottles with oxygen which were heated to as high as 260° F., at which temperature oxidation was rapid. At 210° F. the oxidation rate was moderately rapid, so this temperature was selected as suitable and convenient.

A distinct induction period was found to exist for all samples, but many samples suggested the existence of differences in oxidation susceptibility. They concluded that the resistance to oxidation can best be measured by the duration of the induction period. When oxidation is well started the time required for the formation of a large quantity of gum is very short and the more stable gasolines oxidize at about the same rate as the unstable ones. A sample of gasoline oxidized for 105 minutes produced 298 mgm. of gum; 961 mgm. in 150 minutes and 2,758 mgm. in 363 minutes.

E. W. Zublin has described a method in The Oil and Gas Journal, July 16, 1931, page 26, in which a suitable sample is exposed to 100 pounds pressure at 212° F. for several hours, while the pressure is noted at intervals. After the release of the pressure the liquid is evaporated by the air-jet method and the residual gum weighed. A drop in pressure within four hours is believed to indicate poor gum stability on storage.

Voorhees and Eisinger devised the oxygen gum test, consisting of heating a sample of gasoline in oxygen at 210° F. Pressure drop or oxygen absorbed are not measured, the weight of the gum formed being the reliable criterion. Five hours was selected as the time of heating. They found that the rate of gum formation in the oxygen bomb is slow during the induction period, after which it increases very rapidly.

The quantity produced under a fixed condition of oxidation is not a direct measure of stability; because two gasolines may differ very much in weight of gum but only little in duration of induction period. The significant fact is whether a gasoline does or does not form an appreciable quantity of gum under the test.

Gum troubles may appear in the automobile engine in the fuel system, including the carburetor, and in the cylinders, especially the valves.

There is a good discussion of the occurrence and significance of gum in gasoline in Chemical Refining of Petroleum by Kalichevsky and Stagner, Chapter 11. This book may be obtained through the Book Department of The Oil and Gas Journal at $7.

PERSONAL PARAGRAPHS

W. R. RAMSEY, Oklahoma City, Okla., is reported ill at his home in the capital.

* * *

SIR JOHN CADMAN celebrated his fifty-seventh birthday while on his recent trip to Australia.

* * *

GEORGE M. CANTERBURY, Tulsa, was a business visitor in Dallas and other Texas points recently.

* * *

O. J. DYKES, president of the Lisbon Gasoline Corporation, of Shreveport, La., was a recent business visitor in Tulsa.

* * *

C. F. CAMP, secretary and treasurer of the Arrow Drilling Company, has been ill at his home, suffering from recurrence of an old injury.

* * *

MRS. DESMOND BOGGS, of Negritos, Peru, is visiting her parents at Oil Springs, Ontario. MR. BOGGS is on the International Petroleum Company staff.

* * *

RALPH PRYOR and MRS. PRYOR, Wichita, Kans., oil producer, have returned home from an extended summer vacation spent in the New England States.

* * *

R. P. TINSLEY, secretary-treasurer and director, Socony-Vacuum Oil Company, Inc., New York City, has retired and F. S. FALES has been elected treasurer and W. D. BICKHAM, made secretary to fill the vacancies created by Mr. Tinsley's retirement. The position on the board of directors has not yet been filled.

* * *

PETER WASSUNG, of the umpire's staff in Los Angeles, Calif., is the proud father of a baby girl born in Los Angeles about 10 days ago.

* * *

G. S. WALDEN, chairman of the board of the Standard-Vacuum Oil Company, left New York, October 5, on a trip to European points. He will be gone several weeks.

* * *

W. D. MASON, manager of the Sun Oil Company's refinery at Marcus Hook, Pa., has been making a business tour of the country, traveling by private plane.

* * *

P. W. PITZER, general manager of the Chemical Process Company, Inc. Breckenridge, Tex., has returned from a flying trip to Kansas and Oklahoma, stopping in Tulsa on the home flight.

* * *

HARRY MORLEY, formerly of Bartlesville and Tulsa, is now connected with the Oil States Corporation of Chicago, Ill., as secretary and treasurer. CHARLES S. BAUNACH is president of Oil States Corporation.

* * *

C. C. RAE, petroleum engineer, production department, Skelly Oil Company, Tulsa, is reported recovering after an emergency appendicectomy performed in a hospital in Halstead, Kans., last week.

* * *

G. MOSES KNEBEL, chief geologist of Standard Oil Company of Venezuela, accompanied by his family, flew to New York via Pan American Airways. He returned to Venezuela on the Mauretania after visiting the Exposition at Chicago, and points in Texas.

ARTHUR R. CORMODY, of Shreveport, La., vice president of the North Central Texas Oil Company, was a recent visitor in Tulsa.

* * *

ROY LUNDY, of the Tulsa Rig & Reel Company, has returned from a trip that took him to Louisville and other Kentucky centers.

* * *

DR. RALPH MEINTS, experimental chemist for the Mid-Continent Petroleum Corporation, has returned from a vacation in Iowa.

* * *

R. Z. McGOWAN, of the production department of the Pure Oil Company, Chicago, was a business visitor at the Pure company's Tulsa offices.

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CHARLES KLEIN, treasurer of Mid-Continent Petroleum Corporation, and MRS. KLEIN, who spent three months in Europe, have returned to Tulsa.

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CHARLES F. ROESER, Fort Worth, Tex., has been in Colorado Springs, Colo., to return with his family, who had been spending the summer in the mountains.

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GEORGE SHANER, with the Standard Oil Company of New Jersey in New Jersey, and formerly with the Carter Oil Company in Tulsa, was in Tulsa during the week.

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JOHN R. PARKER, formerly assistant to W. R. THAWLEY, chief scout, Gypsy Oil Company, Tulsa, has been transferred to the Great Bend, Kans., office of the company to handle scouting in the Kansas territory.

E. A. SATCHELL, production manager of the Iraq Petroleum Company, has arrived in London, England, on his return trip from a five weeks' visit to the United States.

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JAMES O'DONNELL, district field representative for the Carter Oil Company, in the Shawnee-Seminole fields, has returned to his duties after an extensive vacation spent in Pennsylvania.

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J. E. FLANAGAN, Tulsa manager, land department, the Texas Company, conferred with JOHN RUSSELL, Kansas manager, for the land department of the same company at Wichita, Kans., last week.

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ORMAND BEACH, former football star of the University of Kansas, Lawrence, Kans., and resident of Pawhuska, Okla., is now working in the laboratory of the Imperial Oils, Ltd., refinery at Ontario, Canada.

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EDWARD P. CHALFANT, secretary of the National Standard Parts Association, who has been treasurer of the American Trade Association Executives for the past two years, was elected president of that organization at its convention held in Washington, D. C.

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DR. L. EDELEANU, Rumanian petroleum chemist, has been honored with the Rumanian Order of Chevalier of "Cultural Merit" for his contributions to scientific progress. Doctor Edeleanu was the recipient of the Institution of Petroleum Technologists first internationally awarded Redwood Medal.

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CHARLES BURKE, of the International Petroleum Company, Ltd., left New York on the Grace liner, Santa Elisa for Talara, Peru.

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JOHN G. NATION, superintendent, in the Quiriquire Field of the Standard Oil Company of Venezuela, has been on vacation in the United States.

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GEORGE L. WRIGHT, district superintendent for Texas for the American Glycerin Company, has moved his headquarters from Cisco to Midland, Tex.

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GLENVER McCONNELL, chief mechanical engineer, production department, Shell Petroleum Corporation, Tulsa, has been called to his home in Ohio because of the serious illness of his mother.

* * *

CHARLES B. KNOX, operator in the Weed Patch Pool in the Bakersfield area, California, returned to his home in Havilah, Calif., last week after a month spent with his brother, EARL KNOX, contract driller, in Tulsa.

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DR. WILLIAM S. HOFFMEISTER, for many years paleontologist with Lago Petroleum Corporation at Maracaibo, Venezuela, has been transferred to Standard Oil Company of Venezuela's paleontological laboratory at Caripito.

* * *

C. E. HEYNS, who has heretofore represented Richfield Oil Company, has been appointed representative of the Rocket Oil Company as a member of the Oregon State Petroleum Committee succeeding C. C. BARTHOLOMEW who recently resigned.

DO YOU REMEMBER?

From The Oil and Gas Journal Files

25 Years Ago

October 11, 1909

The Gulf Pipe Line Co. of Oklahoma takes out an Oklahoma charter. It is capitalized at $1,000,000. This action gives the company privileges it would not otherwise be permitted to enjoy under Oklahoma laws.

The most interesting new pool in Oklahoma is Hamilton Switch in Okmulgee County. It is causing much excitement.

Miss Bennie Edwards, of Beaumont, Tex., captures and holds a negro burglar who had raided the house of Norman Hendershot, of the National Supply Co., across the street from her home. The Hendershots were away from home. Mayor Fletcher presents Miss Edwards with a gold police badge.

Cornelius O'Neil, Houston, Tex., producer in the Humble Field, suffers injuries in an automobile accident.

20 Years Ago

October 8, 1914

Fire destroys the business district of Duke Center, pioneer northern Pennsylvania oil town.

The average price of oil in the United States this year has been 81 cents per barrel, but at present Oklahoma-Kansas crude is posted at 51 cents, Pennsylvania Grade crude $1.45 and Gulf Coast 30 to 50 cents.

Lieut. W. Harold Pearson, son of Lord Cowdray, British oil man, taken prisoner by the Germans, was shot and killed by a sentry while attempting to escape.

Daniel J. Lyons, veteran National Transit gauger, dies in Olean, on October 4.

10 Years Ago

October 9, 1924

Over $52,000,000 in royalties has been paid to Indians of the Five Civilized tribes in Oklahoma. These include Cherokees, Creeks, Choctaws, Chickasaws and Comanches. This refers only to the oil on restricted Indian lands, which constitutes only 15 per cent of the original allotments.

A butcher in Middletown, N. Y., sues the Standard Oil Co. for failure to pay a bill for dog meat. Some one at the Standard plant, where there are several dogs, evidently forgot to put the meat bill on the expense account.

The Venezuela field is now producing as much crude per day as Kansas.

C. D. LOCKWOOD, of Houston, Tex., was visiting with his parents in Tulsa last week.

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E. B. REESER, president, Barnsdall Corporation, Tulsa, is in California on company business.

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GEORGE L. WRIGHT, district superintendent for the American Glycerine Company, Cisco, Tex., has moved his office to Midland, Tex.

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G. J. GOODSON has been appointed Mid-Continent district manager for the Bradford Motor Company, and will make his headquarters in Tulsa.

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J. E. JOHNSON, of the motor transport department, Tide Water Oil Company, Tulsa, has returned from a business trip to the New York office of the company.

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C. C. CRIDER, general manager, Taubman Supply Corporation, returned the last of the week from a trip to Shreveport, La., and points in the East Texas Field.

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C. A. PRICHARD, purchasing agent, Mid-Continent Petroleum Corporation, is on a business trip to Chicago and other points in the northern division of company operations.

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JAMES LITTELL, president of the Littell Tool Company, Houston, Tex., has gone to Los Angeles, Calif., for several weeks. While there he will establish California branch offices for his company.

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MARVIN LEE, technical adviser to the Public Utilities Commission of Kansas, Wichita, Kans., has been in Tulsa and other northern Oklahoma cities conferring with officials of companies doing business in Kansas oil fields.

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HARVEY PHILLIPS, chemist for the Mid-Continent Petroleum Corporation, has been on a vacation trip which included New Orleans, Muscle Shoals, and other points of interest in the South.

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J. W. C. McKEE, purchasing agent, Roosevelt Oil Company, Mount Pleasant, Mich., was visiting his friends in Tulsa last week. He was formerly connected with the Oil Well Supply Company in Tulsa and New York City.

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ROBERT J. RIGGS, chief geologist of the Indian Territory Illuminating Oil Company of Bartlesville, Okla., has resigned as of October 15 to become consulting geologist at Tulsa for the Stanolind Oil & Gas Company. He leaves the Indian Territory Illuminating Oil Company after nine years' service.

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JAMES F. HUGHES, in the Magnolia Petroleum Company land department, has been transferred from the Great Bend, Kans., office to Tampico, N. Mex. MICHAEL McKAY, of Great Bend, succeeds him in Kansas, and O. F. BEATTY, now of Wewoka, Okla., will succeed Mr. McKay at Great Bend.

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ALFRED E. BURNS recently retired from his position as director of field operations of International Petroleum Company, Ltd., a post he has occupied since June, 1921. He had been with the company 25 years and had been associated with the petroleum industry in various parts of the world for over 40 years.

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ORLEY R. WALLS, of Oklahoma City, Okla., is the new Texas Company scout in the Oklahoma City and Ardmore areas. He formerly was scout for the Coline company in the Oklahoma City district. C. W. BROCK, who has been Texas scout in the district, has been transferred back to the pipe line department at Seminole, Okla.

Started as Roustabout and Pumper

Upon being mustered out of the Navy at the close of the World War, Wallace H. Collins, now production superintendent for the Shell Petroleum Corporation, got his first oil job as roustabout and pumper for the Associated Oil Company of California. From 1921 to 1924 he acted as treasurer and production engineer for the Oswego Petroleum Company of Tulsa, an organization managed by his older brothers, S. W. and C. L. Collins. In 1924 he took a position in the oil and gas valuation section of the income tax unit and spent the next three years in Washington. In 1927 he joined the forces of the Shell Petroleum Corporation, as assistant to R. W. Bond, in the production engineering department.

WALLACE H. COLLINS

Mr. Collins advanced rapidly in engineering and in 1932 received his "call" to The Hague, Holland. He stayed at the general headquarters of the Royal Dutch-Shell combine for three months, conferring with high Shell production officials, exchanging ideas and investigating various problems. On his return he took up headquarters at St. Louis, Mo., but spent most of his time on technical assignments in Texas. During February, 1933, he moved back to Tulsa to assume his present duties.

Mr. Collins was born in Bradford, Pa., once the oil capital of the world. He was the youngest son of C. P. Collins, a well-known Pennsylvania producer who went to Oklahoma. The son graduated from the Tulsa High School in 1914. Then he went to Cornell University, where he received a degree in mechanical engineering. In 1923 he married Miss Marian Tarbox, of Massachusetts. They have one son. Mr. Collins plays golf, but he gets more fun out of swimming, rowing, fishing, and other aquatic sports.

L. H. PRICHARD, of Anderson-Prichard Oil Company, is back on the job in Oklahoma City, Okla., after having spent a vacation at the World's Fair in Chicago and elsewhere in the North.

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CARL R. SMITH, Panhandle division land man for Skelly Oil Company, with headquarters at Skellyville, near Pampa, Tex., was visiting in the company headquarters in Tulsa last week.

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O. A. SCHILLING, Tulsa, succeeds H. E. HAMILTON as representative for the Mid-Continent Supply Company in Tulsa. Mr. Hamilton has been transferred to Houston, Tex., to handle the business for the company in the Gulf Coast oil fields.

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P. D. BOWLEN, of Toronto, Ontario, president of the Texas-Canadian Oil Corporation, Ltd., formerly the Wainwright West Oils, Ltd., will shortly move to Texas, in order to supervise the company's operations.

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HARRY SNYDER, oil man of Montreal, Quebec, accompanied by M. J. SHEARER, of Rifle, Colo., returned to Edmonton, Alberta, by airplane after more than six weeks spent in northern British Columbia and the Yukon in search of big game. Information secured in their hunting trip indicated that the Dall sheep, all white animals with jet black tails, once believed extinct, still exist; and they are planning a return trip next year in the hope of securing specimens.

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H. F. SINCLAIR, chairman of the executive committee of the Consolidated Oil Corporation; HERBERT R. GALLAGHER, of the same company, and W. A. JONES, first vice president of Cities Service Company, and C. A. FRUEAUFF, general counsel of Cities Service Company, paid a flying visit to Los Angeles, Calif., ostensibly in connection with the proposed reorganization of Richfield Oil Company. Mr. Sinclair is making a tour of the Pacific Coast before returning to New York.

O. E. McCLATCHEY, purchasing agent, Barnsdall Oil Company, was in Kansas City last week on business.

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H. C. UMBURN, drilling superintendent, Shell Petroleum Corporation, Tulsa, is away from his duties upon a five-week vacation.

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W. J. CALLAHAN, scout for the United Production Company in the Laredo district, Texas, has been transferred to the Houston, Tex., office.

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DON G. BARNETT, geologist for the United Gas Company at Houston, Tex., has been transferred to the company's district office at Beeville, Tex.

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R. J. LANDER, safety engineer, Shell Petroleum Corporation, Tulsa, has just returned from the meeting of the National Safety Council held in Cincinnati, Ohio.

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J. M. ARMSTRONG, geologist, Sinclair Oil & Gas Company, Fort Worth, Tex., has moved his headquarters to Midland, Tex., together with J. H. KELSEY, land man.

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ADRIAN MOORE, independent operator, Houston, Tex., and MRS. MOORE, have returned from a trip to Winston-Salem, N. C., where they visited their daughter and family.

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L. E. SHROEDER, of the automotive transport department of the Mid-Continent Petroleum Corporation, is on a two weeks' vacation. He will go first to Kansas City and then visit other points.

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H. R. GRUBER, Tulsa, vice president and sales manager, and M. G. ENSINGER, Kansas City, Mo., vice president in charge of manufacturing for Union Wire Rope Corporation, are visiting the oil fields in Mexico.

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JACK GWYNN has been made store manager of the Hobbs, N. Mex., store of the Republic Supply Company, moving from the Big Spring, Tex., store.

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C. E. JACKSON, of the automotive department of the Mid-Continent Petroleum Corporation and president of the Petroleum Motor Transport Association, has returned after spending a vacation at various Ozark resorts, accompanied by MRS. JACKSON.

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HENRY WALTERS, assistant to the manager of marketing of the Standard Oil Company of New York, is confined to his home in Wantagh, Long Island, with the grippe. CHARICK ROSENCRANTZ, assistant of Mr. Walters, is also suffering from the grippe at his home in Cranford, N. J.

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FRANK BOWSER, scout for the Darby Petroleum Company, and G. G. ASBURY, scout for the Atlantic Oil Producing Company, both of San Angelo, Tex., have been named president and secretary, respectively, by the West Texas Oil Scouts Association. JOE CLINGAN, of the Shell Petroleum Corporation, retires as president, and E. F. BOEHMS, of the University Lands staff, has been secretary-treasurer.

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JAMES McLISTER will sail on the Santa Maria from New York on October 13 for Guayaquil, Ecuador. Mr. McLister returned to Canada in June and has been visiting his brother, JOHN McLISTER, also a returned driller, at Windsor, Ontario. A native of Bothwell, he drilled in the Petrolia and Oil Springs Fields between 40 and 50 years ago in 1908 went to Burmah for three years and was later in Uruguay and Patagonia, and in England during the war. He went to Ecuador for a year as manager of the Ecuador Oil Fields and stayed 13 years, being now an independent operator. The Ecuador fields produce about 50,000 tons of oil a year.

NATURAL GAS DEVELOPMENTS

New York-Pennsylvania Gas Field Developments

WELLSBORO, Pa., Oct. 8.—For the second week there were no completions in the north-central Pennsylvania and south-central New York gas belt. Clarion County Speechley sand operations accounted for one producer, the Dietz farm well of C. H. Weaver, gauged at 35,000 feet just in the sand at 2,046 feet, in Washington Township.

At the close of the week ending October 5, Mutual Natural Gas Co. was shut down temporarily at its Presbyterian Church well in Farmington Township, Tioga County. E. Cabot was down 310 feet on its W. F. Burroughs, Gaines Township, same county, and had a location for its John Stiles, Clymer Township, same county. East Penn Development Co. was drilling at 450 feet on its Roscoe Kemp, Farmington Township, same county.

In the Potter County list Hanley and Bird were down 5,525 feet on their No. 2 S. Gooch, Allegany Township. Pennsylvania Power & Light Co. was fishing at 5,269 feet on its Clair Doty, Hector Township. Cunningham Natural Gas Co. was drilling at 4,377 feet on its George Carrol, Oswayo Township. Bayliss cased and cemented at 5,116 feet on No. 1 E. Estes, Genesee Township. Stocum and others were drilling at 2,810 feet on their J. W. Wells, Allegany Township, and Electro Geometer was down 2,310 feet on its Katherine Currier, same township. In Genesee Township, Bayliss was rigging up for its Earl Pye.

Other Potter County operations were in Hebron Township as follows: United Producers were drilling at 5,375 feet on its No. 2 M. Wilsey. Pennsylvania Power & Light Co. was down 560 feet at its Chloe Kenyon well. Penn United was drilling at 275 feet on its Burt and Lyman. Lycoming was building a rig for its W. B. Hemphill. Same company was down 100 feet on the W. White farm; drilling at 795 feet on the O. W. Greenman farm, and at 280 feet on the R. and G. Carmer farm. Potter Development Co. made a location for its No. 2 Penn State, and was down 355 feet on its B. L. Langworthy well. Sylvania Natural Gas Corp. was building rig for its No. 2 John Higley.

In Cameron County, Tioga Natural Gas Co. was shut down at 4,685 feet on its No. 1 Emporium Bank, and at 4,470 feet on its No. 2 Emporium Bank, in Shippen Township. In Bradford County, Columbia Carbon was drilling at 4,020 feet on the C. Campbell farm, Ridgebury Township.

New York Fields

In Ontario County, Homestead Oil & Gas Co. was down 2,310 feet on the John Gregg farm, Bristol Township. Geneva Gas was drilling at 500 feet on the Stewart Nurseries properties, Phelps Township, same county. Trumbull was shut down on the Ethel Arnold farm, Galen Township, Wayne County. Belmont Quadrangle Development Co. was running pipe at 4,510 feet on the Costom farm, Greenwood Township, Steuben County. In this well the Tully was reached at 4,496 feet. Wittmer Oil & Gas Co. found the Tully at 4,043-94 feet on its Torrence-O'Horrigan, Greenwood Township, same county, and was drilling at 4,106 feet. Hadley and Rogers were down 160 feet on their Cato Bank well, Conquest Township, Cayuga County. Belmont Quadrangle was drilling at 1,675 feet on its Frank Whelan, Rading Township, Schuyler County. Here the Tully was reached at 1,208-57 feet. Empire was rigging up on the Dean estate properties, Alma Township, Allegany County. Higgins and others made a location for its No. 1 Steadman, Allen Township, same county.

Clarion County

The Kelley interests were drilling at 500 feet on the Korb and Beary farm, Washington Township, Clarion County. Jeannerat was spudding on the Bartlett farm, Piney Township, same county. Fryburg Motor was down 825 feet on the McCloskey farm, Farmington Township, same county. Kaber and Kiser were drilling at 750 feet on the Carson farm, Beaver Township, same county. Alum Rock Gas located No. 5 Bank Lot, Highland Township, Clarion County.

Hearing on Regulations Scheduled in Michigan

MUSKEGON, Mich., Oct. 8.—Hearing on a proposed set of new natural gas production, transmission and marketing rules and regulations for Michigan will be held in Lansing, October 25, before the Michigan Public Utilities Commission. Preliminary hearings have been held by various branches of the industry who come together on October 25 to formulate improved rules for gas operations.

Principal objection to the proposed new rules is centered on the proposed reduction of the allowable taken from 25 to 15 per cent of the open flow daily. It is possible a clause providing for withdrawal of a minimum average during the winter months to handle the peak load will be submitted.

Michigan Supreme Court, Friday, issued a writ of prohibition under which the utilities commission is prevented from proceeding with the regulation of natural gas rates in the Saginaw region. A hearing scheduled for last week was indefinitely adjourned.

Mount Pleasant city commission also voted to call upon the state commission to fix natural gas rates in Mount Pleasant after four months of unsuccessful negotiations with officials of the Gas Corporation of Michigan. The city commission seeks a reduction of at least 4 cents per 1,000 feet from 40 to 36 cents while the company claims it cannot drop its price below 38 cents.

TURNER VALLEY GAS QUOTAS

EDMONTON, Alberta, Oct. 6.—Following the completion by officials of the lands and mines department of the 1934 pressure tests in the Turner Valley Field, the department has set new quotas of gas withdrawals for the various wells. The daily maximum aggregate for the field is placed at 252,000,000 feet. Tests of some 91 wells showing a net decline in pressure throughout the field were taken as the basis for the new quotas; and while in some individual cases there are slight increases, the net result is a decrease in the total gas flow permitted under the Alberta government's conservation policy. The quota in force during the past year was 280,000,000 feet a day.

CANADIAN PRODUCTION

OTTAWA, Ontario, Oct. 6.—The production of natural gas in Canada in July amounted to 951,466,000 feet against 1,142,526,000 feet in June and 998,528,000 feet in July, 1933. In the seven-month period ending with July, the production in 1934 was 13,971,932,000 feet against 14,286,840,000 feet in 1933. Imports of mixed (natural and artificial) gas in July amounted to 7,330,000 feet valued at $4,955 compared with June imports of 5,962,000 feet valued at $4,024.

Home Study Course on Natural Gas Available

The American Gas Association announces that a home study course on natural gas is now available. Being a highly specialized subject, institutional instruction on natural gas operations was obtainable only in a few large cities. The course now offers every natural gas employe, wherever he may be located, an opportunity to obtain further knowledge in his chosen field. It is also believed the companies will benefit from employes better equipped to perform their duties by having studied this course.

The Natural Gas Department of the American Gas Association several years ago sensed the need for instruction available to all and took steps to satisfy it. After careful consideration the University of Kansas was selected as being an institution qualified and equipped to prepare and conduct a course on natural gas. The extension division of that institution consented and the long and arduous job of preparing the course was started under the direction of Prof. C. M. Young.

Professor Young is head of the Department of Mining Engineering and has been a teacher of mining engineering for over 25 years. A great deal of research on natural gas problems has been conducted under his direction. The course will be conducted under his personal supervision.

Immediately after these arrangements were made with the University of Kansas, the Natural Gas Department of the American Gas Association appointed an advisory committee to review all lesson material and otherwise advise with Professor Young on the contents of the course. The personnel of the advisory committee was carefully selected and as a result four men were appointed whose reputations as successful natural gas company executives are well known. They are F. L. Chase, vice president and operating manager, Lone Star Gas Co., Dallas, Tex.; J. D. Creveling, Henry L. Doherty & Co., New York; Dr. J. B. Garner, Hope Natural Gas Co., Pittsburgh, Pa., and A. B. Macbeth, president, Southern California Gas Co., Los Angeles, Calif. These men have devoted much time to help Professor Young include in the course the most practical and useful instruction possible.

Other executives of the industry, specialists on particular phases of natural gas operations, were consulted on highly specialized parts of the course which covers all phases of natural gas operation from the general consideration of chemistry and physics and the origin of gas and oil, through all of the steps in production, transmission, distribution, to and including utilization.

A student is supplied with a text "Natural Gas" in two volumes written especially for the course. The chapters or assignments divide the course into 27 lessons. A student is expected to complete at least one lesson a month, but if he desires and is able to do so, he may send in lessons at much shorter intervals.

Upon satisfactory completion of the course on natural gas a certificate will be issued by the Extension Division of the University of Kansas. Although the course does not provide credit toward any university degree, it may be regarded as work equivalent to that which would be required in a five or six-hour course in engineering.

Enrollments will be accepted at any time. Application blanks and further information can be obtained either from the Extension Division, University of Kansas, or Kurwin R. Boyes, secretary, American Gas Association, 420 Lexington Avenue, New York.

Natural Gas for London, Ontario, Is Projected

LONDON, Ontario, Oct. 6.—The City Gas Co., which has been supplying artificial gas to London for 70 years, has submitted a proposal for changing to natural gas. The project involves the laying of a 55-mile pipe line from the Dawn gas field to London. The outlay involved in the change is estimated close to $1,000,000. Details of the project were submitted to a committee of the London city council by William H. Duffield, vice president and general manager of the City Gas Co., which is a subsidiary of the Union Gas Co. of Canada, Ltd.

The rate schedule for natural gas involves savings of from 12 to 48 per cent from existing artificial gas rates. The natural gas schedule proposed is as follows:

Domestic consumers: First 200 feet, 40 cents per 100; next 4,800 feet, 75 cents per 1,000; next 5,000 feet, 65 cents per 1,000; over 10,000 feet, 50 cents per 1,000. For industrial consumers the rates up to 10,000 feet are the same; next 240,000 feet, 50 cents per 1,000; next 250,000 feet, 47½ cents; next 2,000,000 feet, 45 cents; next 2,500,000 feet, 42½ cents; over 5,000,000 feet, 40 cents. Minor adjustments to appliances will be made without charge to consumers. Introduction of natural gas will mean, it is estimated, an annual saving to consumers of $138,000 on the basis of present consumption.

Representatives of the London city council, the City Gas Co. and the Union Gas Co. visited the Dawn Field. The Dawn Field was first developed in 1914. Union's No. 1, drilled at that time, still carries 800 pounds pressure, and Union No. 59, a recent completion, shows 845 pounds. The gas is sweet and odorless, and has approximately double the heating value of artificial gas. The field is about 12 miles long, and out of 78 wells drilled at various times, some 20 are listed as producers.

In addition to the 55 miles of line, adjustments will be made to the London distributing system to equalize pressure. The Dawn production is at present used to supplement the gas supply for Sarnia, Petrolia and other communities in Lambton County served by the Union Gas Co.

GAS RATE FOR CITY FUND

LOS ANGELES, Calif., Oct. 6.—To supplement general city funds the Long Beach city council ordered an increase in the gas rates. By a vote of 7 to 2, councilmen authorized a surcharge to be determined by the budget officer. Estimates of the amount needed have placed the proposed increase at 15 per cent.

Although city gas revenues have been used to augment general funds on numerous occasions in the past, this is the first increase in gas rates ordered with the deliberate purpose of raising money for general purposes.

CITY GAS WELL

LONDON, Ontario, Oct. 6.—H. T. Segarth of Wiarton, drilling for water on the T. H. Robinson property south of the Vauxhall bridge, struck a fair gas flow at 163 feet. The gas burned with a flame 8 inches high from a 4-inch pipe until the well was capped. Shallow gas had previously been struck at Pond Mills and elsewhere in the London area, but the nearest previous strike was 2 miles from the Vauxhall bridge strike.

FIELD PROBLEMS FROM READERS

Edited by Thomas F. Smiley

This department is conducted in order that men connected with the drilling, producing and transporting branches of the petroleum industry may obtain aid in solving problems that confront them in their work. Readers are invited to send questions freely. These questions will be placed in the hands of persons capable of answering them authoritatively, and the answers, based on the best available information, will be published.

Each question should give as much detail as possible, especially if it involves depths of sands, types of sands and operations on adjoining or nearby properties. The source of questions will be considered confidential, and only the initials of the sender will be published. Questions involving patented processes, intricate formulas or estimate of cost cannot be answered. If an immediate answer is important, one will be given by mail when the writer requests it.

In this connection, The Oil and Gas Journal will be glad to publish articles from field men who have devised new methods or improved old ones.

Mystified by Gas He Sees Coming Off Storage Tanks on Lease

I am mystified by gas which I can see coming off storage tanks on my lease and I am writing to see if you can offer any explanation. I run all the oil, water and gas into flow tanks first. There is not enough gas to use commercially, and I draw off water at intervals. I assume that there is no gas left in association with the oil when I run the oil from the flow tank to the stock tanks. A pipe line takes the oil from the stock tanks. I often find gas rising from the storage tanks even in the cool days of Spring and Fall. I am unable to figure out the source of it. Can you explain this and can you offer any remedy?—H. S. Y.

What you need on your property is gas tight or vapor pressure tanks. They may be of the welded, bolted or riveted steel type or made out of wood and fitted with tight deck or roof. Such tanks may be fitted with connections that regulate the escape of gas to the atmosphere and if they were in use on your lease this phenomenon you describe would not occur.

The products of any oil well will be gas and crude oil and perhaps water. The liquids will settle to the bottom of the tanks, but the gaseous vapor will tend to rise and if the top of the tank is not tight this gas will escape to the atmosphere. That is what you observed.

It is good practice to provide the lease with an oil and gas separator. This may be large or small to suit the well's capacity and one or more wells may discharge their production into it. The oil and gas separator may be set upon an elevation such as a structure or upon a small mound of earth so that the oil can gravity from the lower portion of the separator to the lease stock tanks while the gas is conducted away from the upper portion of the tank by proper connections. It may be delivered to a natural gasoline plant and the gasoline contents extracted, or if the gas is not suited for such treatment it may be burned in a flambeau located at some safe place away from the wells or the tanks.

To prevent gas from escaping with the oil from the oil and gas separators or receiving tank into the lease storage tanks it is usual to provide some form of liquid seal at the discharge end of the pipe line where it leaves the vessel in which the oil and gas is separated. This seal may be made by inverting the end of the pipe in the oil so that the oil is siphoned out of the tank or by constructing a "U" in the line outside the receiving tank so that gas will be trapped out of the oil as it flows from the first receptacle to the lease storage.

This gas that you observed escaping will lower the gravity of the pipe line oil if it is allowed to bubble through the oil in the stock tanks. The gas now under consideration should not be confused with vapors that evaporate from the surface of the oil in the tanks. This vapor should be saved also, or better it should not be permitted to form, for it also lowers oil gravity.

However, passing gas through crude oil will result in most instances in robbing the oil of some of its lighter hydrocarbons enriching the gas but depleting the crude oil of part of its values.

All tank companies are prepared to furnish tight receiving tanks, oil and gas separators and tight lease storage tanks, all fitted with proper valves and fittings to regulate and retard the movement of gases or vapors and prevent these valuable hydrocarbons from being wasted.

Attaining Strength and Economy in Building Wooden Derricks

We use wooden derricks almost altogether in this field and I have helped to build many of them, but I am not at all sure that we make the best derrick it is possible to make out of timber. There has been so much standardizing in oil field equipment in recent years that I am wondering whether there is any sort of standard fixed for the construction of wooden derricks. It seems to me there should be, for I am sure some of the derricks built in this district are not of scientific design. If there are any rules for building a derrick according to sound mechanical practice I would appreciate having them.—R. T. S.

Practice in the construction of wooden derricks was based largely upon precedent until relatively recent years. Little or no scientific design, with members proportioned to the loads which they would carry, entered into them. The National Lumber Manufacturers Association made a study of the subject, however, with the result that better designs, based on physical tests, have been developed, providing increased strength and greater economy in use of material.

The following discussion of wooden derrick building, which seems to fit your needs, is taken from Prof. L. C. Uren's "Petroleum Production Engineering."

"Legs of wooden derricks are usually constructed by nailing 2-inch plank together to form a right-angled, trough-shaped member. In heavy derricks each leg has often been constructed of one 2 by 10-inch plank and five 2 by 12-inch planks. However, tests have shown that a derrick leg made of one 2 by 8-inch plank and five 2 by 10-inch planks is actually stronger, though of smaller cross section. This is believed to result from a little known characteristic of wood-compression members, by which those wider in horizontal cross section than four and one-half times their thickness fail in torsion rather than by direct column action.

"Derricks of lighter construction, appropriate only for drilling to shallow depths with cable tools, make use of considerably less timber, the cross section sometimes consisting of only two 2-inch planks. In drilling to greater depths, a second or outer pair of planks called doublers are frequently used to reinforce the lower part of each leg. The horizontal girts and inclined braces are also of 2-inch material, 6, 8, 10 or 12 inches wide, depending upon the place of the member in the structure. In addition to the usual braces and girts nailed on the inside of the derrick legs, heavy timber derricks requiring additional strength are sway-braced by adding a second set of girts on the outside of the legs opposite every alternate set of inside girts and placing long diagonal braces between the outside girts.

"The engine and belt house are often built of 1 by 12-inch lumber on a light timber frame, and the housing about the lower part of the derrick may also consist of light wooden sheathing. Many operators, however, prefer corrugated sheet iron for housing in the engine house, belt house and such parts of the derrick as may require protection from the weather. For the walk connecting the derrick and engine house and the flooring throughout the structure 2-inch planks are used. A rack of 6 by 8-inch timber built beside the elevated walk is provided for the support of casing, drill-pipe tubing, tools and miscellaneous equipment.

"A well-constructed 122-foot timber derrick for rotary drilling, with flooring and all necessary sills, ladders, etc., will contain about 26,000 feet board measure of lumber. About 30,000 feet board measure will be required for a 136-foot derrick. A 74-foot derrick, appropriate for cable drilling to moderate depths, requires about 20,500 feet board measure."

Hydrometers and How the A.P.I. Scale for Oils Came Into Use

There is a little confusion in my mind concerning the Baume and the American Petroleum Institute scales for determining the gravity of petroleum. How did the A.P.I. scale come to be originated and what is its relation to the Baume scale?—N. N. E.

When the Bureau of Standards first took up the testing of hydrometers in 1904 careful inquiry was made of the manufacturers and users of these instruments as to the basis of the various scales in common use.

In the case of hydrometers for petroleum oils the scale said to be in general use was the so-called Baume scale for liquids lighter than water. The relation of this scale to specific gravity is expressed by the formula

$$\text{Degrees Baume} = \frac{140}{\text{sp. gr. } 60°/60°\text{F.}} - 130.$$

Subsequently, it was learned that a great number of the hydrometers used in the oil trade were not on the basis of the above relation, but were more nearly in agreement with a scale represented by substituting 141.5 and 131.5 in the above formula in place of 140 and 130. Accordingly, new tables were published by a manufacturer of hydrometers and by oil companies on this basis; that is, the actual hydrometer scales were continued unchanged and the relation to specific gravity was redefined, the new scale still being commonly known as the Baume scale. At the same time other manufacturers and users of oil hydrometers continued the use of the original Baume scale. As a result much confusion has existed in the petroleum-oil industry by reason of the use of two so-called Baume scales for light liquids, one based on the modulus 140 and the other on the modulus 141.5.

The American Petroleum Institute, the U. S. Bureau of Mines, and the U. S. Bureau of Standards in December, 1921, agreed to recommend that in the future only the scale based on the modulus 141.5 be used in the petroleum-oil industry, and that it be known as the A.P.I. scale, to clearly distinguish it from the original Baume scale for light liquids.

In order to make possible the use during the transition period of such Baume hydrometers as may be on hand, there has been provided a table showing the degrees A.P.I. (modulus 141.5) corresponding to degrees Baume (modulus 140).

Why Was It Called That?

BUOY

The buoy used to mark the course of under-water pipe lines in bayous and backwater of seacoast country gets its name from the French bouee, of the same meaning, and is of German origin. In this connection it is of interest to note that the only President who ever obtained a patent on his own invention was Abraham Lincoln and that the invention was a collapsible buoy to raise river boats, permitting them to pass over sand bars and other obstructions without unloading cargoes. The buoys were rubberized fabric bags fastened to the side of vessels and then inflated. Lincoln's invention was never put into successful operation, but the principle of using buoyant tanks attached to the sides of sunken vessels to float them, is in general use the world over.

MARKET RECORD OF OIL SECURITIES

Active Oil Stocks Listed on New York Stock Exchange

Compiled by Carl H. Pforzheimer Co., 25 Broad Street, New York City, Members New York Stock Exchange and New York Curb Exchange

1934 High	1934 Low	Week ended October 6 Sales	High	Low	Close	Stocks—	Total shares outstanding	Par value	Dividend rate	Payable or last paid	1933 High	1933 Low	1932 High	1932 Low	1931 High	1931 Low
55⅝	40½	1,900	43	40½	40¾	Amerada Corp.	774,875	N.P.	50cQ	7-31-34	47⅝	18½	22¾	12	23	11¾
35¼	21½	6,200	25¼	22⅜	23	Atlantic Refining	2,673,334	$25	25cQ	9-15-34	32½	12⅝	21⅞	8⅝	23⅝	8⅝
10	5⅞	15,100	6½	5⅞	6⅜	Barnsdall Corp. A	2,248,795	$5	....	5-11-31	11	3	7	3⅜	14½	4
19¼	6⅞	17,400	9⅜	8½	8⅞	Columbia Gas & Elec.	11,610,036	N.P.	12½cQ†	5-15-34	28⅛	9	21	4¼	45⅝	11⅝
14¼	7¼	19,200	8⅜	7½	7¾	Consolidated Oil Corp.	14,218,835	N.P.	14c	10-31-34	15⅝	5	9	4	15⅞	4⅛
22¾	15¾	23,500	18	16⅛	17⅛	Continental Oil of Delaware	4,738,593	$5	25c	10-31-34	19⅝	4⅞	9⅝	3⅝	12	5
23½	12	2,200	15⅝	14¼	15	General Asphalt	387,149	$10	....	6-15-32	27	4⅝	15½	4¾	47	9⅝
5⅝	2½	900	3⅛	2¾	2¾	Houston Oil (new)	1,098,618	$25	....	10-17-30	7⅜	1⅞	5⅜	1⅜	14⅛	3
3⅜	1¾	200	1¾	1⅛	1¼	Louisiana Oil Refining	1,302,158	N.P.	....	.....	4	⅝	2¼	½	4½	1
14¾	9⅛	5,600	11⅛	10	10½	Mid-Continent Petroleum	1,857,912	N.P.	25c	11-15-34	16	3⅝	8⅞	3⅝	16⅝	5
21⅛	10	200	12½	12	12	National Supply of Delaware	382,591	$25	....	5-15-31	28⅝	4	13	3½	10¼	5
15⅞	8½	6,100	10¼	9⅝	9½	Ohio Oil Co.	6,563,107	N.P.	15c	9-15-34	17⅝	4⅜	11	5	19½	5⅛
8⅞	5½	200	5½	5½	5½	Pacific Western Oil	1,000,000	N.P.	25c‡	10-25-33	9½	3	8	3	15	2⅝
2½	⅝	200	¾	¾	¾	Panhandle P. & R.	198,770	N.P.	....	.....	4¼	⅝	1¾	¼	4⅛	⅝
20⅜	13¾	17,200	15½	13¾	14⅛	Phillips Petroleum	4,154,687	N.P.	25c	9-1-34	18⅜	4⅜	8½	2	16⅝	4
16¾	8	3,300	8⅞	8⅛	8⅛	Plymouth Oil Co.	990,261	$5	25cQ	9-29-34	17⅝	6¾	12½	6	18	6
14⅞	6⅜	10,900	7⅜	6⅜	6⅞	Pure Oil	3,038,370	N.P.	....	9- 1-30	15⅜	2½	6½	2⅞	11⅞	3¼
39⅛	32⅛	1,100	33⅝	32⅛	32⅛	Royal Dutch N. Y. shares	432,224	$14	$1.35	7-31-34	39⅜	17⅝	23⅜	12⅛	42⅝	13
39⅜	20¾	2,600	22½	20¾	22	Seaboard Oil of Delaware	1,204,460	N.P.	15cQ§	9-15-34	43⅜	15	20⅜	6⅝	20⅜	5½
11½	6⅛	4,700	6⅝	6⅛	6¼	Shell Union Oil	13,070,625	N.P.	....	6-30-30	11⅝	4	8⅜	2½	10¼	2½
89	57	500	64⅜	61¼	61½	Shell Union Oil pfd.	400,000	$100	....	7- 1-31	61	28½	65¼	18	78	15
12⅞	7¼	13,000	12⅞	11	12⅜	Simms Petroleum	461,000	$10	30c	8- 1-34	12⅜	4⅞	7½	3¼	11	3½
11½	6	700	6⅜	6	6	Skelly Oil	1,008,514	$25	....	12-15-30	9⅛	3	5⅜	2½	12⅞	2
19⅞	12½	35,100	14⅜	13½	13⅝	Socony-Vacuum	31,019,694	$25	15cQ	9-15-34	17	6	12¼	5¼	21	8⅜
42⅞	26½	39,000	30⅜	26½	29	Standard Oil of California	13,102,900	N.P.	25c	9-15-34	45	19½	31⅞	15½	51⅜	23¼
32¾	25	17,200	25⅞	25	25⅛	Standard Oil of Indiana	15,941,894	$25	25cQ	9-15-34	34	17	25½	13⅛	38½	13½
41	27	No sales ..	..	..	..	Standard Oil of Kansas	200,000	$10	50cQ	10-31-34	39⅞	12¾	16½	7	19	7⅝
50⅛	40⅝	26,500	43½	41⅛	42½	Standard Oil of New Jersey	25,740,965	$25	50cSA	6-15-34	47½	22⅜	37⅜	19⅞	52½	26
69¾	51½	500	69	67	67	Sun Oil	1,733,013	N.P.	25cQ	9-15-34	59	35	39⅞	24⅜	45¼	28⅜
20⅜	20	13,000	22¼	20¼	21¼	Texas Corp.	9,486,417	$25	25cQ	10- 1-34	30½	10⅜	18⅛	9¼	36¼	9⅞
6½	2½	1,100	2⅝	2½	2⅝	Texas Pacific Coal & Oil	880,708	$10	....	12-31-29	6½	1⅜	4	1½	6½	1⅞
14⅜	8⅛	8,700	9¼	8⅛	8⅜	Tide Water Associated	5,618,672	N.P.	....	2-16-31	11⅜	3½	5⅝	2	9	2¼
85¼	64½	1,700	78½	74⅜	76	Tide Water Associated pfd.	666,524	$100	$1.50Q	10-10-34	65¼	23½	60	20	68	20½
20½	11½	10,300	14	11½	13⅜	Union Oil of California	4,386,070	$25	25cQ	8-10-34	23⅜	8½	15⅝	8	26⅝	11
21¼	15⅝	1,700	20⅜	19¾	20⅜	Union Tank Car	1,200,000	N.P.	30cQ	9- 1-34	22¾	10½	19¼	11⅜	25½	16
5⅜	2½	900	3¼	3	3⅛	Wilcox Oil & Gas	424,839	$5	....	5-10-28	5½	2	8¾	2¾	9⅞	2¾

*Ex-dividend. †Payable in 5 per cent convertible preferred stock. ‡Initial dividend. §Plus extras.

Active Oil Stocks Listed on New York Curb

Compiled by Carl H. Pforzheimer Co., 25 Broad Street, New York City, Members New York Stock Exchange and New York Curb Exchange

1934 High	1934 Low	Week ended October 6 Sales	High	Low	Close	Stocks—	Total shares outstanding	Par value	Dividend rate	Payable or last paid	1933 High	1933 Low	1932 High	1932 Low	1931 High	1931 Low
38	26	150	31½	31½	31½	Buckeye Pipe Line Co.	200,000	$50	75cQ	9-15-34	39¾	25	35	17½	56	30
5½	2¾	1,500	3	2¾	2¾	Carib Syndicate	579,000	25c	....	.....	7⅜	¼	¾	¼	2⅜	⅛
126½	115	150	126	126	126	Chesebrough Mfg. Co.	120,000	$25	$1Q†	9-29-34	129	71	90	53	129½	75
4¼	1⅝	13,100	1⅞	1⅝	1⅞	Cities Service	37,804,394	N.P.	....	6- 1-32	6¼	1½	6⅞	1¼	20¾	5
3¼	1	700	1¼	1¼	1¼	Colon Oil	2,200,000	N.P.	....	.....	4	¼	1¼	¼	3½	½
3⅞	1⅛	400	1¼	1⅛	1¼	Cosden Oil	399,687	$1	....	.....	3⅞	1⅜	2⅛	¼	3¾	⅜
14⅜	9⅝	6,100	13⅝	12⅝	12⅞	Creole Petroleum	6,974,356	$5	....	.....	12	4¾	3⅛	1¾	3⅞	1⅝
7½	4⅝	100	4⅝	4⅝	4⅝	Darby Petroleum	509,696	$5	25c	7-25-34	8	2½	7⅛	1⅝	2½	1⅝
2¼	1¼	No sales ..	..	..	..	Derby Oil & Refining	263,162	N.P.	....	.....	2¾	⅞	3	1	6	1½
37	30	No sales ..	..	..	..	Eureka Pipe Line	50,000	$100	$1Q	11- 1-34	41¾	20	35	18	36	19
76¾	49¾	3,400	54	49¾	50½	Gulf Oil Corp.	4,538,101	$25	....	10- 1-31	62	24	44¾	23	75½	25⅜
46⅜	33½	9,800	41	38⅝	39	Humble Oil & Refining (new)	8,923,935	N.P.	25cQ	10- 1-34	105½	40	55	35⅝	72	44½
15⅝	12⅝	12,800	15⅝	14⅞	15⅝	Imperial Oil of Canada	26,857,152	N.P.	25cSA†‡	6- 1-34	15⅞	6½	10⅞	6¼	18¼	7⅝
6⅞	4	200	4¼	4⅛	4¼	Indiana Pipe Line	300,000	$10	15cSA†	11-15-34	8	3⅛	7½	2¾	21⅛	5½
30¾	19⅜	16,300	30¾	29½	30	International Petroleum	14,247,088	N.P.	56cSA†‡	6- 1-34	23½	8⅞	12¼	8	15½	7⅜
4	2⅞	3,200	3⅝	3⅜	3½	Louisiana Land & Exp.	3,000,000	N.P.	....	.....	2¼	⅛	2½	½	2	½
5⅞	3½	No sales ..	..	..	..	Lion Oil Refining	270,000	N.P.	....	10-27-30	9½	1¼	3½	⅞	6¾	1½
8⅜	4½	600	5	4⅞	5	Lone Star Gas	5,382,723	N.P.	15cQ§	3-31-34	11⅞	4⅜	11	3⅜	29	5½
5½	4	1,300	4½	4¼	4½	Mountain Producers	1,682,182	$10	15cQ	10- 1-34	6½	2½	4⅜	2⅛	5⅞	2
18⅛	13¼	300	14⅜	14¼	14⅜	National Fuel Gas	3,810,183	N.P.	25cQ	10-15-34	20	10	14⅝	8	26½	9⅜
9½	7⅜	100	7⅝	7⅝	7⅝	National Transit	509,000	$12.50	40cSA	6-15-34	10	5½	10½	6	17½	5
2½	1¾	No sales ..	..	..	..	New Bradford Oil	1,445,202	$5	10c	9-15-34	2⅛	½	⅞	¼	1½	½
2¾	1	300	1⅛	1	1	New Mexico and Arizona	1,000,000	$1	....	.....	1⅞	½	1¼	⅜	3	⅜
4¾	3	No sales ..	..	..	..	New York Transit	100,000	$5	15cSA	10-15-34	4⅞	3	9¾	7½	14½	5⅜
7	4⅝	No sales ..	..	..	..	Northern Pipe Line	120,000	$10	25cSA	7- 2-34	6⅛	4¼	5½	3½	35½	20
2⅝	⅞	2,000	1½	1⅜	1½	Pantepec Oil	1,608,700	N.P.	....	.....	3¾	⅛	⅝	⅛	2	⅜
3⅜	⅞	100	1	1	1	Ryan Consolidated	296,931	N.P.	....	.....	4¼	⅜	2⅛	⅜	3	⅜
7⅛	5½	1,300	6½	6⅛	6½	Salt Creek Producers	1,496,859	$10	20cQ	8- 1-34	9¼	3½	5½	2⅞	7⅝	2⅝
26½	17½	1,500	22¼	21	21⅝	South Penn Oil	1,200,000	$25	30cQ	9-29-34	22¼	11	16½	9⅝	23⅞	9¼
5½	4	No sales ..	..	..	..	Southern Pipe Line	100,000	$10	15cSA	9- 1-34	6	2⅜	10	3⅜	17	7
47	41	No sales ..	..	..	..	Southwest Penna. Pipe Lines	35,000	$50	$1Q	10- 1-34	48	24½	37	27	42½	25
17⅝	14⅝	4,700	15⅜	15	15½	Standard Oil of Kentucky	2,606,983	$10	25cQ	9-15-34	19¾	8⅜	15⅞	8⅞	23⅝	12⅛
10⅞	9	No sales ..	..	..	..	Standard Oil of Nebraska	190,822	$25	....	6-20-34	20½	11	19	10¼	36½	16
28½	14	300	15¼	15	15	Standard Oil of Ohio	753,740	$25	....	1- 3-33	41	15½	30⅛	15½	62½	23
2	1	2,400	1⅜	1	1⅛	Suburay Oil	1,162,840	$5	....	4-15-31	1½	¼	⅝	⅛	5¼	⅛
11	4⅜	500	5½	5¼	5½	Texon Oil & Land	936,028	N.P.	15cQ†	9-29-34	13¾	6¼	10½	4½	12⅞	2⅛

*Ex-dividend. †Plus extras. ‡Payable in Canadian funds. §Payable in preferred stock.

Note—In comparing highs and lows for the several years in the two tables, it will be necessary to take into consideration cases where there have been stock split-ups.

Kansas Wildcats

(Continued from Page 70)

ROOKS COUNTY

Stearns & Streeter's No. 1 Meyers, NE NW NW Sec. 34-9-16w.
Rigged up.

RUSH COUNTY

Corbett, Barbour et al's No. 1 Schmidt, C SW SW SE Sec. 10-17-16w.
Location.

Corbett, Barbour et al's No. 1 Schmidt, SW SW SE Sec. 10-17-16w.
Rigging up cable tools.

RUSSELL COUNTY

Blair et al's No. 1 Fink, SW NW SE Sec. 16-14-14w.
Rigging up.

Eldorado Ref. Co.'s No. 1 Stratman, SW SE SE Sec. 32-14-11w.
Set 10-in. csg. 1,315 ft.; drlg. 1,860 ft.

Tom Palmer et al's No. 1 Herbel, NW SW Sec. 4-12-11w.
Set 12-in. csg. 474 ft.; drlg. 485 ft.

SCOTT COUNTY

Atlantic Oil Prod. Co.'s No. 1 Vaniman, C SE NE Sec. 15-20-33w.
Drlg. 3,633 ft.

SEDGWICK COUNTY

Allison & Fitzwilliams et al's No. 1 Struthers, NE SW Sec. 34-28-2w.
Drlg. 500 ft.

Gypsy Oil Co. et al's No. 1 Tammany, NW NE Sec. 4-29-1w.
Simpson at 3,878 ft.; small show of oil; dry and abnd. 3,952 ft.

Jones, Kirk et al's No. 1 McQuillan, NE NW NE Section 21-29-2w.
Chat 3,618 ft.; T.D. 3,730 ft.; fishing.

Leo Keller et al's No. 1 Russell, SW SW NW Sec. 16-29-2.
Cellar.

D. R. Lauck et al's No. 1 Roy, SE SW Sec. 24-29-1w.
Drlg. 2,427 ft.

Syndicate O. & G. Co. et al's No. 1 Ratzlaff, NE NW NW Sec. 30-26-2.
Rigged up and S.D.

Trees Oil, Derby Oil et al's No. 1 McMinn, NW SW NE Sec. 36-26-1e.
T.D. 3,320 ft.; S.D. for casing.

SUMNER COUNTY

Wentz and Continental's No. 1 Small, NW SW Sec. 5-33-4w.
Drlg. ahead 4,480 ft.

Wentz et al's No. 1 Horsley, CSL SW SW SW Sec. 18-35-1.
Drlg. 2,560 ft.

TREGO COUNTY

Marathon Oil Co.'s No. 1 Kline, SW SE Sec. 19-14-24w.
T.D. 4,002 ft.; U.R. 8-in. csg.

WASHINGTON COUNTY

Rose Oil Co. et al's No. 1 Penwell, NE NW SE NE Sec. 16-3-1 (O.W.D.D.).
Old T.D. 1,720 ft.; R.U. and S.D.

WOODSON COUNTY

Schwartz et al's No. 1 Collins, SW NW NE Sec. 30-23-14.
Drlg. 610 ft.

Gulf Coast Wildcats

(Continued from Page 58)

STRATTON RIDGE—BRAZORIA COUNTY

Amerada Pet. Corp.'s No. 1 Bowers, 2,400 ft. N line and 1,550 ft. from E line of Jared Groce Sur.
T.D. 4,450 ft.; plugged back to 1,722 ft.

WEST COLUMBIA—BRAZORIA COUNTY

Sterling O. & R. Co.'s No. 3 Hogg, 100 ft. N of No. 2 and 100 ft. from W line of lease.
Temp. abnd. 6,308 ft.

Texas Co.'s No. 34 Hogg, 2,483 ft. N, 50 ft. W from SE cor. of lease in M. Varner Sur.
Temporarily S.D. 5,242 ft.

BARBERS HILL—CHAMBERS COUNTY

McAlbert Oil Co.'s No. 7 J. F. Wilburn, 150 ft. W of No. 6 and C of H. Griffin Sur.
Drlg. rock 1,239 ft.

Mills Bennett Prod. Co.'s No. 2 Fisher, 150 ft. N of No. 1, Wm. Bloodgood Sur.
Plugged back and sidetracked 5,009-34 ft.; drlg. lime 5,138 ft.; top lime 5,130 ft.

Mills Bennett Prod. Co.'s No. 10 Wilburn, 190 ft. S N line, 150 ft. W of No. 9, Henry Griffith league.
Drlg. lime rock 4,354 ft.

Moody Corp.'s No. 1-C E. W. Barber, 302 ft. from N line and 312 ft. from E line of "B" lease, H. Griffith Sur.
Cmtd. 24-in. csg. at 60 ft.

Humble O. & R. Co.'s No. 6-B Kirby, 593 ft. N of S line, 388 ft. E of W line of lease, or 125 ft. N and 288 ft. W of No. 5.
Bailing, showing no gas, little oil and water; T.D. 5,219 ft.

Humble O. & R. Co.'s No. 7-B Kirby, 200 ft. W of No. 6 in Henry Griffith league.
Derrick.

Sinclair Prairie Oil Co.'s No. 18-A Wilburn, Henry Griffith league, 150 ft. W of No. 17-A and 14 ft. S N line of lease.
T.S. 5,026-40 ft.; L.P. 62 bbls. per hour, ⅝-in. choke; T.D. 5,041 ft.; comp.

Sun Oil Co.'s No. 6 Higgins, 302 ft. W of E line and 432 ft. N of S line of lease.
Drlg. rock 2,964 ft.

Sun Oil Co.'s No. 19 Chambers, 50 ft. from N and W lines of lease.
Drlg. salt 2,929 ft.

Sun Oil Co.'s No. 17 Wilburn fee, 188 ft. E of W line and 40 ft. S of N line and 130 ft. W of No. 16.
Derrick.

Sun Oil Co.'s No. 23 J. Wilburn, midway between wells No. 17 and 21, or 150 ft. from each well.
Drlg. salt 2,642 ft.

Texas Gulf Prod. Co.'s No. 4-B E. W. Barber, 75 ft. S of Moody Corp.'s No. 6-A Barber and 75 ft. from SW line of 38-ac. lease, H. Griffith Sur.
Drlg. salt 1,465 ft.

Texas Gulf Prod. Co.'s No. 5 J. F. Wilburn, 110 ft. W of No. 2 and 50 ft. N of S line of lease, Wm. Hodge Sur.
Drlg. salt 1,760 ft.

Texas Gulf Prod. Co.'s No. 2 Eberspacher, 480 ft. from S line and center of strip No. 4.
Set 9⅝-in. csg. 5,296 ft.; comp. I.P. 168 bbls. by heads; T.D. 5,337 ft.

Texas Gulf Prod. Co.'s No. 3 O. W. Winfree, 595 ft. S of N line and 50 ft. W of E line of lease.
T.D. 4,279 ft.; plugged back to 3,952 ft.; sidetracked at 3,982 ft.; drlg. 4,137 ft.

Yount Lee Oil Co.'s No. 35 Chambers County, 75 ft. S, 50 ft. W of NE cor. of lease.
Drlg. sand and lime 3,315 ft.

Yount Lee Oil Co.'s No. 36 Chambers County, 50 ft. N of S line and in line with Chambers Co.'s No. 2 and Sun's No. 9 Chambers.
Comp. I.P. 210 bbls.; C.P. 295 lbs., ¼-in. choke; T.D. 3,804 ft.

Yount Lee Oil Co.'s No. 37 Chambers Co., 400 ft. W of No. 24 and in line with Nos. 14 and 21.
Derrick.

Yount Lee Oil Co.'s No. 28 Chambers County, 50 ft. N S line, direct offset to Sun's No. 10 Chambers County, Wm. Bloodgood Sur.
Derrick.

Yount Lee Oil Co.'s No. 9 Phillips, 100 ft W of No. 8.
Drlg. shale 3,104 ft.

BIG CREEK—FORT BEND

Edwards Drlg. Co.'s No. 2 Hausler, 500 ft. SW from No. 1 and 100 ft. from SE line of 103.5-acre tract, Barnabas Wickson Sur.
Moving in material.

BLUE RIDGE—FORT BEND COUNTY

Mills Bennett Prod. Co.'s No. 2 Luscher, 1,950 ft. S and 750 ft. E of westerly NW cor. 500-ac. tract, Thos. Hebermaches Sur.
Cmtd. csg. 5,040 ft. in shale.

BOLING—FORT BEND COUNTY

Allied Minerals, Inc.'s No. 1 E. C. Farmer, James Scott League, 750 ft. SE of NW line and 150 ft. SW of NE line of Gulf Prod. Co.'s E. C. Farmer 50-ac. tract.
Derrick.

Irwin Larsen et al's No. 1 J. R. Farmer, 100 ft. NW and 100 ft. SW from E cor. of 125-acre lease, James Scott Sur.
Location.

THOMPSON—FORT BEND COUNTY

Gulf Prod. Co.'s No. 5 Hammerstram, 3,315 ft. E along S line of lease from SW cor. and 300 ft. N at right angles, Samuel Kennedy Sur.
Drlg. shale 5,320 ft.

ORCHARD—FORT BEND COUNTY

Gulf Prod. Co.'s No. 41 Moore, 3,372 ft. S along W line from NW cor. of James Frazier Sur., and 2,154 ft. at R/A.
Drlg. 2,700 ft.

HIGH ISLAND—GALVESTON COUNTY

Yount Lee Oil Co.'s No. 40 Cade, 430 ft. NW of No. 2-B, 360 ft. from E line of lease and in line with No. 39 and No. 2-B, Fitzsimmons Sur.
T.D. 5,699 ft.; heaving shale.

Yount Lee Oil Co.'s No. 42 Cade, N. Fitzsimmons Sur., half way between Nos. 26 and 28 and 150 ft. E at right angles.
Rig up.

Yount Lee Oil Co.'s No. 22 Smith.
No report.

Yount Lee Oil Co.'s No. 1 Mace Stewart, Martin Dunman Sur.
Drlg. shale 4,477 ft.

BATSON—HARDIN COUNTY

John A. Deering et al's No. 1 Hooks, Willis Donoho Sur., S extension test.
Drlg. shale and lime 4,190 ft.

ARRIOLA—HARDIN COUNTY

Houston Oil Co.'s No. 4-X Arriola fee, 400 ft. E of No. 3-X.
Location.

Republic-Houston Oil Co.'s No. 8 fee.
Preparing to drill plug 5,040 ft.

SARATOGA—HARDIN COUNTY

Hines Bros.' No. 1 Coswell.
T.D. 3,340 ft.; W.O.C.

SOUR LAKE—HARDIN COUNTY

Alpha Pet. Co.'s No. 2 Weiss, E flank of dome.
Drlg. shale 5,126 ft.

Humble O. & R. Co.'s No. 1 Kirby et al, 140 ft. E W line and 300 ft. S N line of old Gulf 170-ac. tract, S. Jackson Sur.
Abnd. 7,311 ft. in salt.

Sun Oil Co.'s No. 2 Bernard Corp., 150 ft. from N and W lines of Lot 11, E.T.&B. Sur., Sec. 69.
Drlg. sandy shale 4,544 ft.

Texas Co.'s No. 312 T. T. Co. fee, 200 ft. N and 200 ft. E of No. 302.
Drlg. 1,515 ft.

GOOSE CREEK—HARRIS COUNTY

Kerring's No. 1 Williams, 180 ft. from SE cor. and 55 ft. NE of Hybush's No. 3, in W. Scott upper league.
Cellar.

Humble O. & R. Co.'s No. 48 Simms-Smith, Scott Lower League, 1,000 ft. E of the most westerly W line, and 300 ft. N of the most northerly S line.
Drlg. shale 5,306 ft.

PIERCE JUNCTION—HARRIS COUNTY

A. & P. Prod. Co.'s No. 3 Whitehead, 150 ft. S of No. 5; 50 ft. from E line of lease, J. Hamilton Sur.
Drlg. shale 2,089 ft.

Beneaum & Trees' No. 1 W. J. Settegast, 2,629 ft. from S line of Sur., and 100 ft. from E line of tract in the J. Kopman Sur.
T.D. 7,165 ft.; sidetracked and drilled to 6,701 ft.; waiting on cement to set.

D. B. Cogswell's No. 1 Herman Hospital, 525 ft. W of NE cor., 200 ft. S of line of lease in J. Kopman Sur. No. A-198.
Set 7-in. csg. at 2,552 ft.; comp. I.P. 1,500 bbls. per day 2,644 ft.

Gulf Prod. Co.'s No. 10 H. C. Cain, 390 ft. S and 290 ft. E of NW cor. of lease and 317 ft. N of No. 9, J. Hamilton Sur No. 879 (workover).
No report.

Rio Bravo Oil Corp.'s No. 9-A Settegast, 1,575 ft. N line, 350 ft. E line NE cor. "A" lease, J. A. Kopman Sur.
T.D. 4,510 ft.; standing.

MYKAWA—HARRIS COUNTY

Danciger Oil & Ref. Co.'s No. 2 Minnetex, 150 ft. of N line and 85.9 ft. of E line of lease, Lot 253, Wm. Lovett Sur.
Drlg. shale and lime 4,100 ft.

West Prod. Co.'s No. 1 Erin, C of Lot 17, Erin Gardens Subd., F. J. Rothaas Sur.
Drlg. shale 4,749 ft.

TOMBALL—HARRIS COUNTY

Amerada Pet. Corp.'s No. 2 Ashley, Joseph House Sur.
Drlg. sand 5,592 ft.

Amerada Pet. Corp.'s No. 6 Otto-Rudel, 562 ft. from S line, 1,539 ft. from E line on 50-ac. tract and 126.89-ac. lease in Joseph House Sur.
Drlg. hard shale and sand 5,473 ft.

Humble Oil & Ref. Co.'s No. 5-B Hope, 1,900 ft. from S line and 466 ft. from W line of "B" lease, A. Senchall Sur., Abst. 722.
Location.

Humble Oil & Ref. Co.'s No. 1 J. Wright, 318 ft. from SE line, 318 ft. from SW line of lease, J. House Sur.
Drlg. shale 4,221 ft.

Humble Oil & Ref. Co.'s No. 2 Hampel.
Comp. for gas well; T.D. 5,580 ft.

Humble Oil & Ref. Co.'s No. 1 John Holderreith, 500 ft. S line, 495 ft. E and W lines of 112.5-ac. lease, C. W. Pillott Sur. No. 632.
Comp. I.P. 618 bbls. per day, ¼-in. choke; T.D. 5,560 ft.

Humble Oil & Ref. Co.'s No. 2 J. Holderreith, 466 ft. S of most S line of cemetery and 572 ft. from E line of tract, C. N. Pillot Sur.
Drlg. 965 ft.

Humble Oil & Ref. Co.'s No. 5 Rudel-Oster, Joseph House Sur.
Comp. I.P. 514 bbls. per day through ¼-in. choke; T.D. 5,566 ft.

Texas Co.'s No. 4 Hirsch, 948 ft. N and 466 ft. W of SE cor. of Wm. Hirsch Sur. Ran 2½-in. tubing to 5,588 ft.; T.D. 5,610 ft.

KITTRELL-HOUSTON AND WALKER COUNTIES

Ben G. Barnett's No. 1 W. A. Reynolds, 330 ft. out of NW cor. of the NW 20 acres of the S 93 acres of Denton & Marshall lease, L. R. Clapp Sur.
Location.

Boone Bros.' No. 1-A Texas Ling Leaf Co., 330 ft. from N and W lines of Texas Long Leaf Lbr. Co.'s 379-acre tract, Geo. Kellman Sur.
Drlg. water well.

Boone Bros.' No. 1 Texas Long Leaf Lbr. Co., 330 ft. each way out of NW cor. of a 62-ac. tract, Charles McEllis Sur.
Abnd. 2,260 ft.

Boone Bros.' No. 2 Trinity State Bank, 660 ft. SE of NE, Charles McEllis Sur.
Drlg. 1,360 ft.

Crown Central Pet. Corp.'s No. 1 Texas Long Leaf Lbr. Co. and Thompson Bros., 150 ft. from W line, 150 ft. from N line of 40-ac. tract in J. S. Estheridge Sur., Abst. 399.
Location.

Eastern Texas Ref. Co.'s No. 1 Texas Long Leaf Lbr. Co., F. Willis Sur., 1½ miles SW of discovery well.
Reported show of oil 1,921 ft.; coring sand 2,060 ft.

Dick Hooper's No. 1 Mangum, Charles McEllis Sur. No. A-382, due S of discovery well.
10-in. csg. at 251; drlg. 1,002 ft.

Hooper's No. 1 Duren, Duren Sur., Abst. 339, 330 ft. from NE line and center between NW and SE line or 1,945 ft. SE of Boone Bros.' No. 1 T.L.L.L. Co. well.
Waiting on wtr. well.

Humble O. & R. Co.'s No. 1 E. T. Shaw, 330 ft. from NE line and 330 ft. from SE line of E. T. Shaw 100-ac. tract, Chas. McEllis Sur.
Cmtd. 7-in. csg.; T.D. 2,107 ft.; plugged back to 2,077 ft.

Humble O. & R. Co.'s No. 1 Texas Long Leaf Lbr. Co., 330 ft. from SW line and 330 ft. from SE line of Texas Long Leaf Lbr. Co., 696-ac. tract, C. C. McEllis Sur.
Coring 2,147 ft.

Humble O. & R. Co.'s No. 2 Texas Long Leaf Lbr. Co., 330 ft. SW of NE line, 660 ft. SE of No. 3, Chas. McEllis Sur., Abst. 382.
Location.

Humble O. & R. Co.'s No. 3 Texas Long Leaf Lbr. Co., 130 ft. SE of NW line, 320 ft. SW of NE line, and 660 ft. NW of No. 2, Chas. McEllis Sur.
Location.

H. L. Hunt Prod. Co.'s No. 1 Starr, 330 ft. from SE line and 330 ft. from SW line of J. Walker Sur.
Abnd. location.

Lion Oil & Ref. Co.'s No. 1 Stokes Heirs, 330 ft. SW of NE line and 330 ft. NW of SE line of the N 58 acres of 275-acre tract, J. Callahan Sur.
Drlg. 20 ft.

Lacy & Miller's No. 1 J. A. Hanner, 330 ft. from E line of lease, Wm. Dillard Sur.
Spudded.

Lawrence & Flannery's No. 1 Texas Long Leaf Lbr. Co., 355 ft. from NW line and 150 ft. from SW line of 20-ac. lease, Mary Milsap Sur.
Drlg. shale 1,526 ft.

Trinity Dev. Co.'s No. 1 G. A. Knox, 1,000 ft. from SE line and 500 ft. from SW line of Wm. Prissick Sur.
Rig up.

VANDERBILT—JACKSON COUNTY

Imperator Oil Co.'s No. 1 Dutton, S C of Lot No. 11, Blk. 25, 450 ft. S of R.R. and 1,350 ft. W line of townsite, Ray Musquis Sur.
Rigged up and S.D.

Turman Oil Co.'s No. 1 T. H. Miller, 150 ft. each way out of E 50-ac. of Miller 100-ac. tract in Ray Musquis Sur.
Rig up.

BIG HILL—JEFFERSON COUNTY

Yount Lee Oil Co.'s No. 1-A Pipkin, 2,640 ft. S and 2,050 ft. W of NE cor. of survey.
Rig up.

FANNETT—JEFFERSON COUNTY

Gulf Prod. Co.'s No. 15 Thomas, 200 ft. W of Gulf's No. 7 Burrell.
Drlg. shale and lime 1,901 ft.

CLEVELAND—LIBERTY COUNTY

Gulf Prod. Co.'s No. 6-C Kirby, 2,796 ft. along N line of John Pleasants Sur. from NE cor. James Eldridge Sur. and 317 ft. E at right angles.
Drlg. gumbo 4,000 ft.

ESPERSON—LIBERTY COUNTY

General Crude Oil Co.'s No. 14 Moores Bluff, 1,675 ft. S, 10 deg. 8 min. E of No. 10.
Drlg. shale 3,005 ft.

General Crude Oil Co.'s No. 9 Davis, 1,200 ft. each way from S and E lines of lease in D. Kokernut Sur.
Drlg. water sand 4,908 ft.

HANKAMER—LIBERTY COUNTY

George Devore et al's No. 1 S. E. Exell, 175 ft. S of Gulf's No. 1 and 165 ft. from E line of 175-ac. lease in Levi Barrow Sur. S.D. 2,617 ft.; prepare to run 7-in. csg.

HULL—LIBERTY COUNTY

G. R. Brown and S. F. Bashara's No. 1 David Hannah, Jesse Devore league, 100 ft. S line, 150 ft. E line, 42-ac. Gulf tract.
Derrick.

Gulf Prod. Co.'s No. 105 Phoenix, 1,154 ft. N, 200 ft. W of SE cor. of 200-acre tract in Jesse Devore Sur.
Comp. I.P. 168 bbls. 24 hrs., ¼-in. tubing choke; T.P. 200 lbs.; T.D. 4,435 ft.

SOUTH LIBERTY—LIBERTY COUNTY

Humble O. & R. Co.'s No. 10 Welder, Duncan Sur., 400 ft. S of No. 9.
Drlg. anhydrite 4,996 ft.

BUCKEYE—MATAGORDA COUNTY

United North & South Dev. Co.'s No. 1 Unit 4, Buckeye farm, J. C. Keller league, 214 ft. N line and 202 ft. E line of lease.
T.D. 7,881 ft.; P.B. 7,870 ft.; swbd. little oil and S.W.; pulling tubing.

United North & South Dev. Co.'s No. 1 Pietner, 1,210 ft. SE No. 1 Stoddard and 136 ft. W of right of way S.T.L.&B.M.Ry. Sur.
Running tubing 7,910 ft.

United North & South Dev. Co.'s No. 1 Unit No. 58, 250 ft. N and 200 ft. W of SE cor. of Unit No. 58.
Cored S.W. sand; to plug back; T.D. 7,955 ft.

MARKHAM—MATAGORDA COUNTY

Hawkins Oil Co.'s No. 1 Hawks fee, 1,350 ft. from N line and 1,650 ft. from E line of 20-ac. lease.
T.D. 600 ft.; derrick down.

Powers Prod. Co.'s No. 4 Myers, in line with wells Nos. 1 and 2, being 250 ft. E of No. 2.
Derrick down.

VAN VLECK—MATAGORDA COUNTY

Skelly Oil Co.'s No. 2 F. G. Cobb, 1,125 ft. E of W line and 2,515 ft. N of S line of F. G. Cobb lease in Marie Cummings Sur. Washing; T.D. 7,073 ft.

CONROE—MONTGOMERY COUNTY

Humble O. & R. Co.'s No. 1 Dodson, 250 ft. from W line, 765 ft. N of No. 1, W.C.R.R. Sur.
Rig up.

Humble O. & R. Co.'s No. 1 Madeley State Land, Ransom House Sur., 150 ft. N offset No. 28 Madeley.
Drlg. sand 5,220 ft.

Strake Pet., Inc.'s No. 3-B Dean, 739.5 ft. N of No. 2-B and 500 ft. S of the N line of lease, W. C. C. Lynch Sur.
Drlg. 4,826 ft.

ORANGE—ORANGE COUNTY

Trio Oil Co.'s No. 1 D. S. Comier, 69 ft. W of E line and 39 ft. S of N line of 6.33-ac. tract in W. M. Dyson Sur.
Prepare to spud.

PORT NECHES—ORANGE COUNTY

Texas Co.'s No. 6 Kuhn, 150 ft. E, 150 ft. N of SE cor. of Mary Hall Sur.
Bldg. derrick.

Texas Co.'s No. 8 Kuhn, 1,320 ft. N and 350 ft. E of SE cor. of Mary E. Hall Sur. No. 2 in T. J. Notgrass Sur.
Drlg. shale and lime 5,222 ft.

Texas Co.'s No. 9 Kuhn, 990 ft. N and W of SE cor. of Mary E. Hall Sur. No. 2.
Drlg. 3,140 ft.

LIVINGSTON—POLK COUNTY

T. D. Humphries' No. 1 J. C. Whitferth, Block H.
Derrick.

Sun Oil Co.'s No. 1 Pratt, A. Viesca Sur., 330 ft. N line and 330 ft. E line of lease.
Preparing to drill deeper; T.D. 4,243 ft.

Smith & McDannald's No. 1 Davis & Holmes, 1,486 ft. from N line, 330 ft. from W line of 40-ac., A. Viesca Sur.
S.D. sandy shale; waiting on drill pipe.

GRETA—REFUGIO COUNTY

Atlantic and Stanolind's No. 7-G O'Brien.
Derrick.

Hewitt & Daugherty's No. 12 Lambert.
Rigging up.

Humble Oil & Ref. Co.'s No. 8 F. W. V. Heard, 1,490 ft. from E line, 1,394 ft. from N line of 327-ac. lease in Crunk Sur.
Swabbing; T.D. 4,382 ft.

Humble Oil & Ref. Co.'s No. 9 Fannie Heard, 933 ft. E of No. 7, 1,150 ft. S of No. 8.
Drlg. shale 3,850 ft.

Humble Oil & Ref. Co.'s No. 12 J. F. B. Heard, 3,251 ft. from S line, 2,542 ft. from W line of lease.
T.D. 4,385 ft.; drlg. plug.

Stanolind O. & G. Co.'s No. 4-A O'Brien, 1,000 ft. from N line, 800 ft. from S line of 79.8-ac. lease, Peoples Sur.
No report.

Stanolind O. & G. Co.'s No. 3 J. M. O'Brien, Peoples Sur.
Moving in rig.

United Prod. Co.'s No. 14 Fox (D.D.), 466 ft. from N line of 848-ac. tract and 1,

660 ft. W of No. 11, Wm. Hews and L. Brown Sur.
T.D. 6,675 ft.; plugged back to 3,488 ft.
United Prod. Co.'s No. 10 M. F. Lambert, Charles Hardwick Sur., 466 ft. from S line, 506 ft. from E or W line of Blk. 17 Preparing to set surface csg.; drlg. sticky Cmtd. csg.
United Prod. Co.'s No. 11 M. F. Lambert E. W. Hardwick Sur., 434 ft. from S line, 506 ft. from E line of Blk. 2.
Drlg. sandy shale 2,256 ft.
United Prod. Co.'s No. 12 M. F. Lambert Hardwick Sur., 469 ft. from S line, 506 ft. from W line of Blk. 4.
Drlg. sand and lime 3,342 ft.

REFUGIO—REFUGIO COUNTY

Houston Oil Co.'s No. 9 W. J. J. Heard, 2,500 ft. S, 2,700 ft. E, NW cor. of lease.
T.D. 3,718 ft.; comp. gas well 3,460 ft.
Houston Oil Co.'s No. 16 W. J. J. Heard, 660 ft. SE of No. 15.
Making D.S. test 3,461 ft.
Houston Oil Co.'s No. 16 F. B. Rooke, 640 ft. W of No. 15.
Drlg. 1,500 ft.
United Prod. Co.'s No. 8 J. A. Lambert, 854 ft. N of NW cor. of W. Heard tract and 150 ft. W of tract line, L. M. Rogers Sur.
T.D. 6,905 ft.; plugged back to 6,495 ft.

COLETTA CREEK—VICTORIA COUNTY

American Liberty Oil Co.'s No. 1 Terrell, Abnd. 4,750 ft.
Rupert Cox's No. 1 Antone Trybil, R. Manchola Sur.
Moving in derrick.
Albert Plummer's No. 2 Terrell, 698 ft. from NW line, 330 ft. NE line of 57-ac. tract, Manchola Sur.
T.D. 1,326 ft.; trying to shut off gas.
Nutex Oil Co.'s No. 2 Zimmer, Manchola Sur.
T.D. 2,239 ft.; top sand 2,207 ft.; swabbing est. 400 bbls. daily.
Albert Plummer's No. 1 Zimmer, 330 ft. NE and SE lines of lease in Manchola Sur.
T.D. 3,566 ft.; lost hole 3,460 ft.; sidetracking 2,400 ft.

KEERAN—VICTORIA COUNTY

Gulf Prod. Co.'s No. 6 Keeran, begin at intersection of R.R. and SW line of survey, thence NE along R.R. 6,257 ft., thence NW at R/A 2,539 ft. in M. DeLeon Sur.
Drlg. shale 6,008 ft.

McFADDIN-O'CONNOR DISTRICTS—VICTORIA AND REFUGIO COUNTIES

Humble Oil & Ref. Co.'s No. 2 McFaddin, C. O. Edwards Sur.
Drlg. shale 3,665 ft.
Humble Oil & Ref. Co.'s No. 16 O'Connor, 933 ft. N by 45 deg. E of well No. 15, F. Rois Sur.
Drlg. plug 3,040 ft.
Texas Co.'s No. 2 McFaddin, 9,150 ft. S and 300 ft. at R/A out of NW cor. of C. M. B. Hoyt Sur.
Drlg. shale and lime 5,725 ft.

CLAY CREEK—WASHINGTON COUNTY

Sun Oil Co.'s No. 10 Janner.
Drlg. shale 1,300 ft.
Sun Oil Co.'s No. 2 Kubel.
Coring shale 1,982 ft.

LOUISE—WHARTON COUNTY

Pure Oil Co.'s No. 1 Adams, T. W. Heard Sur., Sec. 26, Abst. 465, 471 ft. NW cor., 467 ft. from SW line out of most westerly NW cor. of section.
Set 9⅝-in. csg. at 5,126 ft.; T.D. 5,150 ft.
Pure Oil Co.'s No. 2 Stewart, Morris & Cummings Sur., Sec. 25, 990 ft. out of SW cor. of 160 acres.
Drlg. shale 7,382 ft.

SOUTH LOUISIANA FIELDS

BLACK BAYOU—CAMERON PARISH

Brownie Babbette Oil Co.'s No. 1 R. A. Moore, 562 ft. W, 50 ft. S of NE cor. of E½ of SE Sec. 14-12s-12w.
Swabbed S.W. and S.D.; T.D. 6,298 ft.
Shell Pet. Corp.'s No. 3 State.
Drlg. shale 6,157 ft.
Shell Pet. Corp.'s No. 20 Watkins, 1,611 ft. S and 216 ft. W of NE cor. Sec. 18-2s-12w.
Derrick.

BOSCO—ACADIA AND ST. LANDRY PARISHES

Superior Oil Co.'s No. 2 Arceneaux, 1,963 ft. S and 1,708 ft. W of NE cor. of Sec. 33-8s-3e.
Location.
Superior Oil Co.'s No. 2 Comeaux, 1,876 ft. S and 467 ft. W of NE cor. Sec. 34-8s-3e.
Derrick.
Superior Oil Co.'s No. 2 Hermances, 1,175 ft. S, 597 ft. E of NW cor. Sec. 34-8s-3e.
Drlg. sand and shale 7,300 ft.
Superior Oil Prod. Co.'s No. 1 Adras Guilbeau, 492.6 ft. E and 508.2 ft. S from NW cor. of SW Sec. 26-8s-3e.
Drlg. hard shale 8,537 ft.
Superior Oil Co.'s No. 3 Iseringhauser, 1,517 ft. E, 330 ft. N of SW cor. Sec. 27
Bldg. derrick.
Superior Oil Co.'s No. 1 Matancon, 375 ft. S and 63 ft. E of NW cor. SW Sec. 34-8s-3e.
Cmtd. 13⅜-in. csg. on bottom 1,349 ft.
Superior Oil Prod. Co.'s No. 1 Walter V. Larcade, 462.4 ft. N and 500.2 ft. S of NW cor. of Sec. 35-8s-3e.
Set 9⅝-in. csg. 7,324 ft.; comp. I.P. 342 bbls. in 13 hrs., 12/64-in. choke on tubing; T.D. 7,849 ft.
Superior Oil Co.'s No. 2 Larcade, 502 ft. N and 1,197 ft. E, SW cor. Sec. 26-8s-3e.
Drlg. sand and shale 5,525 ft.
Superior Oil Co.'s No. 4 Larcade, 658 ft. S and 2,292 ft. E from NW cor. of Sec. 35-8s-3e.
Location.
Superior Oil Prod. Co.'s No. 1 Euclide LeBlanc, 1,373 ft. S and 673.3 ft. W of NE cor of Sec. 33-8s-3e
Drlg. broken sand and lime 7,902 ft.
Superior Oil Prod. Co.'s No. 1 Lucien Lavergne, 596 ft. E and 330 ft. N of SW cor. of Sec. 27-8s-3e.
Drlg. sand and shale 7,675 ft.
Superior Oil Prod. Co.'s No. 1 Moise Lavergne, 369.7 ft. W and 98 ft. N of SE cor. of Sec. 28-8s-3e.
Derrick.
Superior Oil Prod. Co.'s No. 1 Auguste Martinez, 2,519.6 ft. S and 1,057.2 ft. W of NE cor. of Sec. 35-8s-3e.
Plugged back to 9,103 ft. to test upper sand.
Superior Oil Co.'s No. 1 Trahan, 1,392 ft. N, 543 ft. W of SE cor. Sec. 27.
Derrick.
Superior Oil Co.'s No. 3 Hermandes, 329 ft. from S line, 669 ft. W of NE cor. of NW of Sec. 34-8s-3e.
Derrick.
Superior Oil Co.'s No. 2 Iseringhauser, 689 ft. from W line, 330 ft. from N line of 31.86-acre tract, Sec. 35-8s-3e.
Drlg. sand and shale 5,074 ft.
Superior Oil Co.'s No. 1 L. Johnson, 1,623 ft. N and 762 ft. E of SW cor. of NE of Sec. 34-8s-3e.
Drlg. shale 7,813 ft.
Superior Oil Co.'s No. 3 Larcade, 542 ft. E and 500 ft. N of SW cor. of Sec. 36-8s-3e.
Derrick.

BAY JUNOP—TERREBONNE PARISH

Texas Co.'s No. 5-B State, 2,202 ft. N and 944 ft. E of SW cor. of Sec. 23-21s-14e.
Drlg. shale 3,901 ft.

CAILLOU ISLAND—TERREBONNE PAR.

Texas Co.'s No. 12 State Caillou Island, 2,420 ft. E and 73 ft. S of NW cor. of Sec 20-22s-20e.
Comp. I.P. 837 bbls. per day; T.D. 4,056 ft.
Texas Co.'s No. 14 State-Caillou Island, 1,514 ft. E and 2,628 ft. S, NW cor. Sec. 20-22s-20e.
Drlg. sand 3,974 ft.

CAMERON MEADOWS—CAMERON PAR.

Burton-Sutton's No. 1 School Land.
Drlg. sand 4,539 ft.
Burton-Sutton Oil Co.'s No. 4 School Land, 2,891 ft. W and 150 N of SE cor. of Sec 16-4s-13w.
Pulling tubing to re-plug back pressure valve in attempt to complete; T.D. 4,537 ft.
Texas Co.'s No. 1 Miami Corp.
Drlg. shale 7,177 ft.

EDGERLY—CALCASIEU PARISH

Union Sulphur Co.'s No. 2 Hunter, 1,366 ft. N 425 ft. W of SE cor. SW Sec. 21-9s-11w.
Fishing 5,353 ft.

DOG LAKE—TERREBONNE PARISH

Texas Co.'s No. 11 State, 150 ft. N and 2,474 ft. W, SE cor. Sec. 31-21s-16e.
Building derrick.
Texas Co.'s No. 15 State, 2,602 ft. N and 1,363 ft. W, SE cor. Sec. 31-21s-16e.
Rig up.

QUEYDAN—VERMILLION PARISH

Pure Oil Co.'s No. 6, Alliance Trust, 667 ft. E, 1,787 ft. S line of lease, Sec. 34-11s-1w.
Drlg. shale 9,162 ft.

HACKBERRY—CAMERON PARISH

Calcasieu Oil Co.'s No. 2 Hansen, 400 ft. W and 300 ft. S of No. 1 in Sec. 14-12s-10w
Prepare to drill plug; T.D. 5,995 ft.
Gulf Ref. Co.'s No. 15-A M. P. Irwin, 368 ft. N and 241 ft. W of the SE cor. of Sec. 12-12-10.
Drlg. sandy shale 6,053 ft.; show of oil 6,048-58 ft.
Wilfred LaHay's No. 1 Roux, Sec. 36-12s-10w.
Abnd. 3,956 ft.
Texas Co.'s No. 12-B State, 500 ft. SE of No. 10-B or 1,360 ft. E and 149 ft. S of NE cor. of Sec. 13-12s-10w.
Comp. I.P. 1,512 bbls.; T.D. 5,832 ft.
Texas Co.'s No. 13-B State, 400 ft. N of NE cor. of lease, Sec. 13-12s-10w.
Location.
Union Sulphur Co.'s No. 1 Barbee est., 1,720 ft. N line, 330 ft. E of SW cor. Sec. 13-12s-10w.
T.D. 7,529 ft.; P.B. 4,665 ft.
Union Sulphur Co.'s No. 9 Humble, 300 ft. E and slightly N of No. 1 well, or 330 ft. N and 270 ft. E of the SW cor. of Sec. 13-12s-10w.
Drlg. shale and lime 4,697 ft.
Yount Yee Oil Co.'s No. 1-A Gulf Land, 2,000 ft. S and 50 ft. E of the NW cor. of Sec. 22-12-10.
Rig up.
Yount Lee Oil Co.'s No. 2-A Gulf Land, 1,100 ft. S and 50 ft. E of the NW cor. of Sec. 21-12-10.
Rig up.
Yount Lee Oil Co.'s No. 15-A Gulf Land, 1,160 ft. S and 715 ft. W of the NE cor. of the SW of Section 16-12-10.
Drlg. sand 2,956 ft.
Yount Lee Oil Co.'s No. 1 School Land, 1,160 ft. S, 715 ft. W of NE SW of Sec. 16-12-10w.
Rig up.

NEW IBERIA—IBERIA PARISH

I. Delcambre's No. 1 Viatar, 150 ft. E, 150 ft. S and 150 ft. W of SE cor. of tract, Sec. 41-12s-5e.
Fishing 245 ft.
Harrison & Abercrombie's No. 1 J. E. Schuring, 3,480 ft. S 75 deg. 25 min. west along section line from E cor. of fractional Sec. 44-12s-5e, and thence 1,121 ft. N 11 deg. 35 min. W, or at R/A to said line in Sec. 56-12s-7e.
Sidetracking at 2,400 ft.
Y. D. Spell's No. 2 Sabiater, 1,200 ft. N and 28 ft. W of E line, Sec. 54-12s-7e, 150 ft. N of discovery well.
Drlg. shale 3,140 ft.

IOWA—CALCASIEU AND JEFF DAVIS PARISHES

Magnolia Pet. Co.'s No. 10 Walt, 330 ft. N and E of SW cor. of lease.
Location.
Magnolia Pet. Co.'s No. 9 Walt, 330 ft. E and S of the C of the lease, and is N of No. 8 Walt.
Comp. I.P. 600 bbls. per day through ¼-in. choke; T.D. 6,852 ft.
Magnolia Pet. Co.'s No. 3 Willett, 335 ft. from S line, 990 ft. from W line of NW Sec. 7-9s-6w.
Fishing 5,890 ft.
Shell Pet. Corp.'s No. 1 Scott, 230 ft. out of NW cor. of lease.
P.B. to 4,850 ft.; T.D. 7,267 ft.; sidetracking.
Shell Pet. Corp.'s No. 5 Stratford, 1,094 ft. S, 330 ft. E of NW cor. of Sec. 18-19s-6e.
T.D. 6,909 ft.; flowing wash water with some oil.
Shell Pet. Corp.'s No. 3 Ardoin, 990 ft. S and 300 ft. E of NW cor. 8½ NW Sec. 18-19s-6e.
Coring shale 6,640 ft.
Shell Pet. Corp.'s No. 3 Tuten, 1,159 ft. W and 330 ft. from S of NE cor. SE Sec. 13-9s-6w.
To set csg.; T.D. 1,393 ft., sticky shale.
Shell Pet. Corp.'s No. 3 Willett, 300 ft. N and 990 ft. S of SW cor. of NW cor. of Sec. 7-8s-6w.
Rig up.

JENNINGS—ACADIA PARISH

Yount Lee Oil Co.'s No. 14 Housierre-Latrielle, 260 ft. N of No. 13, Sec. 47-9s-2w.
Drlg. shale 5,864 ft.

LAKE BARRE—TERREBONNE PARISH

Texas Co.'s No. 10 L.L.&E., 4,543 ft. S, 503 ft. W of NW cor. Sec. 30-21s-20e.
Drlg. shale 3,738 ft.
Texas Co.'s No. 11 L.L.&E., Sec. 30-21s-20e
T.D. 3,693 ft.; sidetracked at 2,668 ft.; drlg. at 2,691 ft.
Texas Co.'s No. 13 L.L.&E.
Drlg. anhydrite and lime 3,192 ft.
Texas Co.'s No. 26 Lake Barre, 150 ft. N from No. 22, Sec. 30-21s-20e.
Comp. T.D. 3,824 ft.; I.P. 1,352 bbls. per day ¼-in. choke.

LAKE HERMITAGE—PLAQUEMINES PARISH

Humble O. & R. Co.'s No. 2 LaFourche Basin Levee Dist.
Drlg. sand and shale 4,450 ft.

LAKE PELTO—TERREBONNE PARISH

Texas Co.'s No. 11 Lake Pelto, 1,500 ft. SW of No. 5.
T.D. 5,511 ft.; P.B. 3,534 ft.; aband. 3,946 ft.
Whitstone O. & G. Co.'s No. 1 Buckley, 300 ft. S and E of NW cor. SW SW Sec. 35-19s-16e.
S.D. 2,700 ft.

LAKE WASHINGTON—PLAQUEMINES PARISH

Humble O. & R. Co.'s No. 23 Cockrell-Moran, 650 ft. N and 21 deg. 30 min. E of No. 2 in Twp. 20s-26e.
Drlg. sand 2,353 ft.
Humble O. & R. Co.'s No. 24 Cockrell-Moran, 400 ft. E, 100 ft. S of Freeport Sulphur's No. 11 Cockrell-Moran, SE of Sec. 24-20s-24e.
Abnd. 1,295 ft. in caprock.

LEESVILLE—LAFOURCHE PARISH

Robert Bowles' No. 3 Crosby, 2,408 ft. N and 1,427 ft. E of SW cor. of Lot 6, Sec. 26-21s-22w.
T.D. 3,871 ft.; I.P. 22½ bbls. per hour; comp.
Emerald Pet. Co.'s No. 7 State of Louisiana.
Derrick.
Gulf Prod. Co.'s No. 9 Bernard, midway between Gulf's No. 3 and No. 7 on L. Bernard lease, 48 ft. from NS line of lease, Sec. 36-21s-22e.
Drlg. sandy lime 3,423 ft.
Gulf Prod. Co.'s No. 8 Bernard, 568 ft. E along S line of 5.08-ac. tract from SW cor. and 446 ft. N at right angles, Sec. 26-21s-22e.
Fishing 3,888 ft.
Emerald Pet. Co.'s No. 8 State of La., 455 ft. N of No. 1.
Drlg. 2,673 ft.
Emerald Pet. Co.'s No. 10 State, west bank, 300 ft. S of well No. 1.
Location.
Emerald Pet. Co.'s No. 11 State, east bank, 327 ft. N of well No. 1.
Location.
Emerald Pet. Co.'s No. 12 State, east bank, 250 ft. S of well No. 1.
Location.
Frank L. Hill's No. 1 Bernard, 1,423 ft. N and 308 ft. E of SW cor. Sec. 26-21s-22e.
S.D. 2,670 ft.
Leesville Oil & Gas Co.'s No. 1 Southern Louisiana Canal Navigation Co., 35 ft. W of Bank of Bayou, 15 ft. N of S bank, Sec. 26-21s-22e.
Drlg. shale 3,665 ft.
Lincoln Oil Co.'s No. 4 State, 350 ft. N and 1,040 ft. E of SW cor. of Lot 6, Sec. 26-21s-22e.
Comp. I.P. 800 bbls. per day through tubing; T.D. 3,704 ft.
Prince Oil Co.'s No. 3 Deambre Nical, 1,387 ft. E and 2,275 ft. N of SW cor. Lot 6, Sec. 26-2s-22e.
T.D. 3,884 ft.; cmtd. csg.
Texas Co.'s No. 20 L.L.&E., Sec. 27-21s-22e.
Rigging up.

LOCKPORT—CALCASIEU PARISH

Magnolia Pet. Co.'s No. 12 Bordages, 966 ft. W and 93 ft. N of SE cor. N½ NE Sec. 8-10s-19w.
Drlg. shale 6,516 ft.
Union Sulphur Co.'s No. 1 Moss (W.O.).
Drlg. shale 7,028 ft.
Union Sulphur Co.'s No. 1 Farquahar, 200 ft. S and W lines, NE cor. SW SE Sec. 36-12s-10w, 2-ac. tract.
Cmtd. csg. 6,715 ft.

PORT BARRE—ST. LANDRY PARISH

Gulf Prod. Co.'s No. 1 Wilson-Cochran, 600 ft. S along property line and 150 ft. E of most southerly NE cor. of Texas Co.'s Botnay Bay Lbr. Co. lease.
Drlg. sand and shale 3,509 ft.
Gulf Prod. Co.'s No. 8 Wilson Cochran, 568 ft. E along S line of L. Bernard 5.08-acre tract from SW cor. of Sur., 466 ft. N at right angles to said line, being 400 ft. N of line drawn through No. 1 and No. 3, Sec. 26-22s-13e.
Location.
Phillips Pet. Co.'s No. 1 Sibille, 3,663 ft. S from R.R. along W line of Sibille Co., Inc., 180-acre tract and 50 ft. E in Sec. 7-6s-6e.
S.D. 4,337 ft.
Texas Co.'s No. 24 Botney Bay, 600 ft. S along E line, 150 ft. W at R/A from most southerly NE cor. of Botany Bay Lumber Co. lease, Sec. 4-6s-5e.
Set 7⅝-in. csg. at 3,100 ft.; T.D. 3,158 ft.

ROANOKE—JEFFERSON DAVIS PARISH

Humble O. & R. Co.'s No. 3 Devilbiss, 1,399 ft. W, 466 ft. S of NE cor. Sec. 14-9s-4w.
Reaming 3,746 ft.
Humble O. & R. Co.'s No. 1-B Devilbiss.
Drlg. shale 6,972 ft.
Humble O. & R. Co.'s No. 1 Martin Kratzer, 400 ft. out of SE cor. 120-ac. tract, Sec. 14-9s-4w.
Cmtd. csg. 8,330 ft.
Shell Pet. Corp.'s No. 1 Jarnigan, 330 ft. E, 660 ft. S, NW cor. Sec. 12-9s-4w.
Flowed 34 bbls. of fluid per hour, ¾-in. choke, 99 per cent S.W.; T.D. 8,764 ft.

SORRENTO—ASCENSION PARISH

Union Sulphur Co.'s No. 26 United Land
T.D. 4,626 ft.; plugged back to 4,474 ft.

SULPHUR—CALCASIEU PARISH

Union Sulphur Co.'s No. 770 fee (D.D.).
Swabbing; T.D. 4,014 ft.
Union Sulphur Co.'s No. 795 fee.
Drlg. shale 5,883 ft.
Union Sulphur Co.'s No. 801 fee, 1,862 ft. N, 670 ft. E of C of Sec. 29-9s-10w.
Drlg. water sand 3,120 ft.
Union Sulphur Co.'s No. 802 fee, 908 ft. N, 1,840 ft. E of C of Sec. 29-9s-10w.
Drlg. shale 5,150 ft.
Union Sulphur Co.'s No. 805 fee.
Set 9⅝-in. csg. 3,090 ft.; T.D. 3,104 ft.
Union Sulphur Co.'s No. 2 Kelly, 1,345 ft. S, 198 ft. W of the NE cor. of Sec. 30-9s-10w.
Sand, odor of oil, 5,115 ft.

SWEET LAKE—CAMERON PARISH

Pure Oil Co.'s No. 12 Yount, Lee fee, 800 ft. S of No. 11, in line with Nos. 9 and 10, Sec. 13-13-3w.
S.D. 7,439 ft.

VINTON—CALCASIEU PARISH

Trio Oil Co.'s No. 3 Gray, 233 ft. N and 22 ft. W of SE cor. of NE SW NE Sec. 33-10s-12w.
T.D. 3,607 ft.; comp. 260 bbls. per day, 5 per cent water, ⅝-in. choke.
Vinton Oil Co.'s No. 1 J. G. Gray, 220 ft. from N line and 545 ft. from E line of SE NE Sec. 4-11s-12w.
Drlg. 2,674 ft.
Vinton Pet. Co.'s No. 2 Mathilda Gray, 100 ft. N of No. 1 and in Sec. 33-10s-12w. (W.O.); T.D. 3,225 ft.; W.O.C.

WHITE CASTLE—IBERVILLE PARISH

Shell Pet. Corp.'s No. 9 Wilburn, 300 ft. E of No. 7.
Reaming to set csg.; T.D. 7,517 ft.

MISCELLANEOUS WILDCATS

TEXAS

ANGELINA COUNTY

Thayer et al's No. 1 Dearmond, J. T. Peavy Sur., 2½ miles SE of Zavalla.
Hard lime 1,915 ft.; T.D.

BRAZORIA COUNTY

Amerada Pet. Corp.'s No. 1 Houston Farm Dev. Co., 1,414 ft. N, 316 ft. W of SE cor. of L. Bachelder Sur.
Cmtd. 11¾-in. csg. at 6,736 ft.
Harrison & Abercrombie's No. 1 Bernard River Land, 1,000 ft. out of SE cor. of Lot 23
S.D. 7,340 ft. in shale; D.S. stuck.
Gillock Pet. Co.'s No. 1 Frank Truksa, 200 ft. from S and 1,000 ft. from E lines of 75-ac. tract, Sec. 7, H.T.&B.R.R. Sur.
Reaming to bottom 6,337 ft.
Holt et al's No. 1 Griffith, J. B. Bailey Sur.
T.D. 4,200 ft.; waiting orders.
Stanolind Oil & Gas Co.'s No. 1 J. W. Surface, 466 ft. N and 400 ft. W of most easterly SE cor. of 76.9-acre tract, A.C.H. &B. Sur., Abst. 462.
Location.
Turnbull & Irwin's No. 1 Braden, H.T.&B Sur., SE of Sec. 50, 4 miles SE of Juliff
Drlg. shale 6,277 ft.

BRAZOS COUNTY

Buck Wallace's No. 1 Broach, 1,000 ft. from S line, 400 ft. from W line of 251-ac. tract in G. W. Singleton Sur.
T.D. 369 ft.; S.D.

CALHOUN COUNTY

Continental Oil Co.'s No. 1 American Nat. Realty Co., C of NE of Sec. 6, Blk. C.
T.D. 6,625 ft.; running 7⅝-in. csg.
Herman Heep's No. 3 Welder, Jose Maria Rios Sur., 373 ft. from NW line and 1,520 ft. from NE line of survey.
Drlg. S.W. sand 5,785 ft.

CHAMBERS COUNTY

Sun Oil Co.'s No. 1 Hamilton, 400 ft. from N line and 400 ft. from W line of survey, T.&N.O. Sur., Sec. 128.
Location.

COLORADO COUNTY

Coyle-Concord Oil Co.'s No. 1 Nelson, 2,300 ft. SE of NW cor. of Sec., 2,200 ft. SW at right angles in I.&G.N. Sur.
S.D. 6,194 ft.
Steen Drlg. Co.'s No. 1 Stansel, 500 ft. along N line from NW cor., thence 350 ft. at R/A of 371.2-ac. tract, A. E. Parza Sur.
Drlg. shale 3,640 ft.

FORT BEND COUNTY

W. A. Shafer et al's No. 1 V. B. Bertsch, 693 ft. SW of NE line and 1,003 ft. NW of SE line of Sec. 52, H.&T.C. Sur.
S.D. 2,150 ft.
Vico Oil Co.'s No. 1 H. R. Darst, 5,690 ft. N of S line and 685 ft. W of E line of E. Powell Sur.
S.D. 1,670 ft.
Wilks et al's No. 1 Norris, 300 ft. W and 1,353 ft. S of N cor. of 525-ac. tract (5 miles S of Needville).
Rigged up and S.D.

GALVESTON COUNTY

Gillock Pet. Co.'s No. 2 Mace Stewart, 900 ft. N and 150 ft. W of No. 1, Alex Farmer Sur.
Rig up.
H. E. Sedberry, trustee's No. 1 Thomas Shaw (200 acres), 150 ft. NW line, 165 ft. NE line, Lot 66, Sec. 7, Hall & Jones Galveston Island.
S.D. 53 ft.

Humble O. & R. Co.'s No. 1-B Stewart, 415 ft. S of Dickinson Bayou, 460 ft. E of E line of Blk. 16, Beatty Subd., John Sellers Sur.
Drlg. shale 6,285 ft.
Pure Oil Co.'s No. 1 J. W. Shelor (281.2 acres), 2,760 ft. S of Dickinson-San Leon highway and midway E and W lines of lease, B.B.B.&C. Sur.
Drlg. shale and bouiders 6,135 ft.

GRIMES COUNTY

Hubert Holt et al's No. 1 Simon Fuqua, 1,200 ft. N of S line and 400 ft. W of E line of 177-ac. lease and survey, Moses Evans Sur.
S.D. 176 ft.
Dr. Marshall et al's No. 1-B Todd, 300 ft from E line and 175 ft. from N line of 160-ac. tract in extreme NW cor. of county (35 ft. N of No. 1).
Laying water line; T.D. 880 ft.
W. D. Roan et al's No. 1 D. C. Kelly, 1,533 ft. from N line and 168 ft. from E line of U. Sanders Sur., near Carlos.
T.D. 2,360 ft.
J. H. Woodward et al's No. 1 O. A. Hamilton, center of Hamilton 95.5-ac. tract 8 of Richards in the O. Hill Sur.
S.D. 3,290 ft.

HARRIS COUNTY

American Liberty Oil Co.'s No. 1 Sweeney, Sec. 17, W.C.R.R. Sur.
Drlg. sandy shale 2,900 ft.
C. B. Bunte, Inc.'s No. 1 Laura Lackner, 6,400 ft. from E line, 194 ft. from S line of Henry Reinerman Sur., near NW city limits of Houston.
Drlg. 234 ft. in clay.
C. C. Foster and others' No. 1 H. K. Johnson, 2,000 ft. from S line and center of E and W lines of G.C.&S.F. Sur.
Drilled 25 ft. and S.D.
Farrell Bros. Co.'s No. 1 Brooks Est., 7,400 ft. S and W of NE cor. of R. & R. Vince Sur.
Cmtd. csg. 412 ft.
W. U. Paul's No. 1 E. M. House, 2,300 ft. N and 1,000 ft. E of NE cor. of E. Benson Sur. in M. Magruder Sur.
S.D. 3,846 ft.

JEFFERSON COUNTY

Magnolia Pet. Co.'s No. 1 E. Herbert Trust, 990 ft. N, 330 ft. E of SW cor. of P. M. Bell Sur. No. 2.
Drlg. sticky shale 7,557 ft.
Sun Oil Co.'s No. 1 H. Long, 1,500 ft. N line, 990 ft. E line of lease.
Reamed down to 6,513 ft.; plugged back to 6,190 ft.; waiting on cement to set.

LIBERTY COUNTY

R. M. Bruner et al's No. 1 N. Bell, 150 ft. from N line and 150 ft. from W line of Bell's 187-ac. tract, H.&T.B. Sur. No. 4.
Rigging up.
Extension Oil Co.'s No. 1 J. A. Lovett, 300 ft. from E and 600 ft. from S line of lease P. P. Deevers Sur.
S.D. 3,335 ft.
Liberty-Independent Oil Co.'s No. 1 J. M. Neal, 3,550 varas from E line and 500 varas from N line of Samuel Strong Sur.
S.D. 2,410 ft. (corrected).
Magnolia Pet. Co.'s No. 1 Mace Stewart, 3,600 ft. E and 1,370 ft. S of NW cor. of 350-ac. tract in A. Cherry Sur.
Abnd. 5,890 ft. in lime.
A. L. Maxwell's No. 1 M. D. Hinchliff, 800 ft. from E line and 1,000 ft. from N line of H.&T.C. Sur. No. 150.
Location.
Thomas et al's No. 1-A Hicks, 660 ft. from W line and 2,350 ft. from S line of tract in Green Sur.
Preparing to drill deeper.
Turnbull and Irwin's No. 1 Lynott and Buffum, 466 ft. S and E of NW cor. of SE 100 acres of W 400 acres of 856-ac. tract, James Robeson Sur.
Drlg. green shale 4,210 ft.

MATAGORDA COUNTY

Continental Oil Co.'s No. 1 Robbins, J. C. Franz Sur.
Fishing; T.D. 6,990 ft.
Dr. Griffith's No. 1 fee, 3,000 ft. from N line and 3,000 ft. from W line of Wm. E Bell Sur.
Rig up and S.D.
Powers Prod. Co.'s No. 1 Northern Irrigation Co., 300 ft. E and 125 ft. N of Sec. of Lot No. 5, Blk. 9, I.&G.N. Sur.
Abnd. 5,000 ft. in heaving shale.

MONTGOMERY COUNTY

Brown & Wheeler et al's No. 1 Jones, 440 ft. out of NW cor. of S 175 acres of 350-ac. tract.
Location.

ORANGE COUNTY

Blue Line Oil Co.'s No. 1 Godwin, Richard Ballew Sur., 300 ft. from E line and 150 ft. from NE line of Godwin 20-ac. tract.
T.D. 2,986 ft.; moving in heavier rig.
Texas Louisiana Oil Co.'s No. 1 Starks, 2,450 ft. N of NW cor. M. Delano Sur. 68, 10,-500 ft. E at R/A.
T.D. 5,055 ft.; S.D.

POLK COUNTY

Howard Dailey et al's No. 1 Z. B. Knox, 1,450 ft. W and 1,320 ft. S of NE cor. of F. Chairs Sur., 1½ mile NE of Corrigan.
S.D. 60 ft.
J. F. Anderson's No. 1 E. I. Duke (O.W.D. D.), 400 ft. from E and 350 ft. from S of SW cor. of P. Michelick 50-ac. lease, Abst. 50, P. J. Mineral Sur.
Waiting on a new mud pump; T. D. 5,-884 ft.
Johnson Bros.' No. 1 J. F. Smith, Isaac Parker Sur., 330 ft. from S and E lines from J. F. Smith's 55-ac. tract.
Cmtd. surface csg. 315 ft.
Alpha Pet. Co.'s No. 1 Martha E. Roberts, 2,000 ft. W and 5,000 ft. S of most western SW cor. of P. A. Sublett Sur., J. F. DeRumayor Sur.
Cmtd. surface csg. 650 ft.

REFUGIO COUNTY

Heard-Holland Oil Co.'s No. 1 Peck, 366 ft. N and W out of NW and SW of Bonnie View Subd.
S.D. 5,348 ft.
Quintana Oil Co.'s No. 1-B O'Connor, 139 ft. E line and 2,525 ft. S line of B.B.B.&C. Sur., Abst. 96.
T.D. 5,621 ft.; sand 5,588-5,612 ft.; prepare to test.

VICTORIA COUNTY

Devonian Oil Co.'s No. 1 J. M. Fagan, Peter Teal League, Abst. 112, 9,000 ft. from N line, 466 ft. W of E line.
Rig up.
Texas Co.'s No. 1 J. B. Midgett, N 35 deg. W 1,000 ft. and S 55 deg. W 1,000 ft. from SE cor. of lease in T.&N.O. Sur., Sec. 14.
T.D. 5,790 ft.; plugged back and sidetracked at 1,734 ft.; drlg. 1,985 ft.

WALKER COUNTY

E. P. Kilgore et al's No. 1 Lamkin, 330 ft. from S line and 330 ft. from E line of Lamkin 1,000-acre tract in J. J. Holcomb Sur.
Location.

WHARTON COUNTY

Texas Gulf Prod. Co.'s No. 1 Kresta, 440 ft. N and E from SW cor. of tract in Sec. 54, W. B. Ivey Sur.
Reaming 6,343 ft.

SOUTH LOUISIANA
ACADIA PARISH

Woodley Pet. Co.'s No. 1 Daigle, NE cor. SE Sec. 24-7s-1e.
Abnd. 8,504 ft. in sand.

ALLEN PARISH

Humble O. & R. Co.'s No. 1 Industrial Lumber Co., 1,220 ft. W line and 2,440 ft. S line Sec. 21-3s-5w.
Drlg. sandy shale 6,560 ft.

ASCENSION PARISH

Humble O. & R. Co.'s No. 2 S. Gumbel & Co., 500 ft. southwesterly from No. 1, 275 ft. easterly from road and approx. 475 ft. N of S line of tract, Sec. 33-10s-2e.
Location.

BEAUREGARD PARISH

Federal Pet. Co.'s No. 1-B Lutcher-Moore, 6 miles NW of No. 1 Lutcher-Moore and near Fields.
Abnd. 8,415 ft.
Gulf Ref. Co.'s No. 1 Lutcher Moore, 660 ft. from S line, 760 ft. from E line, NE Sec. 25-6s-12w.
Drlg. rock 3,461 ft.

CALCASIEU PARISH

Fohs' No. 1 O. H. Castle, 330 ft. S and 330 ft. W of C Sec. 13-9s-8w.
Location.
Union Sulphur Co.'s No. 3 Barbe, 379 ft. S and 350 ft. W of NE cor of SE of Sec. 11-9s-3w.
Topped oil sand in sidetracked hole at 6,760 ft.; will cement 6⅝-in. csg. and make test.
Union Sulphur Oil Co.'s No. 1 State Land, 1,940 ft. S, 2,513 ft. E of NW cor. Sec. 12-9s-8w.
Drlg. shale 3,420 ft.
Wheeler Oil Co.'s No. 1 Gabbert, 1,322 ft. E and 548 ft. N of SW cor. of Sec. 28-9s-7w.
Rigging up.

EAST FELICIANA PARISH

Thompson Creek Oil Co.'s No. 1 Fannie Noland, 2,600 ft. E and 1,580 ft. N of SW cor. Sec. 70.
S.D. 195 ft.

CAMERON PARISH

Texas Co.'s No. 10-A State, 16,855 ft. W and 3,270 ft. N of NE cor. Sec. 1-14-9w in Twp. 13s-9w.
Drlg. water sand 4,710 ft.

LAFOURCHE PARISH

Barnsdall Oil Co.'s No. 3 Harang Plantation.
Drlg. shale 6,252 ft.
R. L. Gay, trustee's No. 1 Godchaux, 2,924 ft. N and 1,746 ft. E in common cor. of Lots 24 and 26, Twp. 15s-19e.
S.D. 6,226 ft.
Southern Sulphur Corp.'s No. 1 D. L. Lagraize, 500 ft. E of NW cor. of Lot 7 thence 250 ft. S of Sec. 26-21s-22e.
Spudded and S.D.

PLAQUEMINES PARISH

Texas Co.'s No. 12 State-Garden Island Bay, Sec. 107-23s-32e.
Location.
Venice Corp.'s No. 1 Burras.
Set 10-in. csg. at 1,533 ft.

RAPIDES PARISH

J. B. Evers' No. 1 G. Wettermark, 540 ft. S and 520 ft. E, NW cor. NE SW Sec. 35-6n-2e.
Location.
C. D. Loe's No. 1 Barrett, 330 ft. NW of SE line and 980 ft. NE of SW line of Sec. 40-5n-1w.
Rig up and S.D.

ST. BERNARD PARISH

Danciger's No. 1 Battles, 836 ft. N, 1,198 ft. W of SE cor. Sec. 135-14s-14e.
Drlg. shale 2,670 ft.

ST. LANDRY PARISH

Bailey Gaunce's No. 1 Lewis, 300 ft. N and E of SW cor. of NW of NE of Sec. 29-5s-6e (workover).
S.D. 5,043 ft.

ST. MARTIN PARISH

Texas Co.'s No. 6 St. Martin Land Co., 660 ft. S and 500 ft. W of NE cor. SE Sec. 17-8s-7.
Drlg. shale 3,700 ft.

VERMILION PARISH

Moore Bros.' No. 1 Brussard, 350 ft. S of N line, 250 ft. E of W line, NE cor. Sec. 32-11s-3e.
T.D. 4,056 ft.; fishing.

VERNON PARISH

Robert R. Williams, Sec. 8-1n-9w.
Rig up and S.D.

La.-Ark. Wildcats

(Continued from Page 65)

C. M. Cope et al's No. 1 Thomas, 330 ft. S and E, C Sec. 34-13-3.
Set 8-in. with packer 1,614 ft.; fishing for bit and drill collar 1,614 ft.

SABINE PARISH

H. J. Brothers et al's No. 1 Edwards, 300 ft. S. and W. NE cor. SW NW Sec. 29-9-13.
S.D. 1,230 ft.
R. B. Campbell et al's No. 1 Cook Land Co., 150 ft. N, 300 ft. W, SE cor. NW NW Sec. 35-10-12.
Arranging to set 6-in. 1,558 ft.; T.D. 1,-586 ft.
Gerhig Oil Co.'s No. 3 Burkett, 330 ft. N and E, SW cor. SE SE Sec. 9-9-13.
Used acid 2,025 ft.; swabbing to test 2,041 ft.
Halliburton & Meadows' No. 1 Jackson, 330 ft. S and E, NW cor. NE NE Sec. 16-9-13.
P.B. to 1,650 ft.
Helena Oil & Gas Co.'s No. 1-B Graham, 330 ft. S and W NE cor. NE NW Sec. 20-9-13.
Set 10-in. 40 ft.; set 6-in. 1,550 ft.
Zan Lloyd's No. 1 Henderson, 330 ft. N and W, C Sec. 29-9-13.
W.O.S.R. 2,031 ft.
Dr. O. B. Hicks' No. 1 Neal, SE SW SE Sec. 18-9-12.
Set 10-in. 40 ft.

RAPIDES PARISH

Evars & Collingsworth's No. 1 Hickman, 330 ft. S and E, NW cor. Sec. 40-4-1e.
Dry and abd. 2,130 ft.
C. D. Loe, trustee's No. 1 Baird Est., SE cor. Sec. 40-5n-1w.
Rigging up.

UNION PARISH

Lawson & Leavell's No. 1 J. N. Gunter, 640 ft. N and E, SW cor. Sec. 14-23-3w.
Set 10-in. 140 ft.; drlg. 3,030 ft.

ARKANSAS

BRADLEY COUNTY

Seton Oil Co.'s No. 1 Murphy, 330 ft. S and W NE cor. SE Sec. 34-15-10.
Drlg. 3,220 ft.

COLUMBIA COUNTY

Dudney & Woodward's No. 1 Pearce, 330 ft. S and W, NE cor. NW Sec. 7-17-20.
Set 10-in. 132 ft.; S.D. 500 ft.

HEMPSTEAD COUNTY

Ark. Drlg. Co.'s No. 1 Jones, 1,000 ft. S, 600 ft. W, NE SE Sec. 11-14-24.
D.S. stuck 2,808 ft.
E. A. Austin's No. 1 McWilliams, 300 ft. N and W of SE cor. NW SW Sec. 19-13-23.
S.D. 700 ft.
A. H. Bagnelle's No. 1 Trattner & Rhinehart, Sec. 2-13-26.
S.D. 1,992 ft.
F. W. Martin & Co.'s No. 1 Lafferty, 500 ft. N and W SE cor. NW Sec. 17-14-24.
S.D. for wtr. 2,695 ft.

LAFAYETTE COUNTY

Benedum & Trees' No. 2 Bodcaw, C SE SE NE Sec. 19-16-23.
Rigging up.
Douglas Lawn's No. 1 Camp, 330 ft. S and W, NE cor. SW SE Sec. 14-15-23.
S.D. 2,910 ft.
R. H. Neely's No. 1 Flemming, SW cor. NW SW Sec. 31-18-25.
Coring 3,295 ft.

MILLER COUNTY

Fitzwater et al's No. 1 Norson, SW cor. SE SW Sec. 20-15-27.
S.D. 3,177 ft.
Ark. Oil, Gas & Ref. Co.'s No. 1 Beck, SW cor. NW SW Sec. 34-15-26.
P.B. to 2,920 ft.
King Oil Corp.'s No. 1 C. H. Schroder, 200 ft. N, 330 ft. E, SW cor. SW NE Sec. 24-14-28.
S.D. 2,625 ft.
Magnolia Pet. Co.'s No. 4 Olivet, 330 ft. S and W, NE cor. Sec. 4-16-26.
W.O.S.R. 2,947 ft.
Oil Well Oil Corp.'s No. 1 Dodd, 300 ft. S, 200 ft. E, NW cor. SW NE Sec. 10-19-28.
Drlg. 2,920 ft.
John Wrather's No. 1 Beck, SW cor. SW SE Sec. 34-15-26.
W.O.S.R. 2,932 ft.

OUACHITA COUNTY

F. A. Book et al's No. 1 Arnold, Sec. 24-15-16.
S.D. 2,032 ft.
J. S. Carnes' No. 1 Scott, 150 ft. S and E, NW cor. SW NE Sec. 18-14-18.
Tested dry 1,835 ft.; drlg. 1,925 ft.
T. J. Gaughan's No. 1 Bragg, 330 ft. N and E, SW cor. NE SE.
Set 10-in. 104 ft.
J. D. Reynolds' No. 1 Guttry, 452 ft. S, 150 ft. W, NE cor. NE SW Sec. 21-15-19.
S.D. for wtr., 2,050 ft.
Sam M. Richardson & Co., Inc.'s No. 9 J. Goodwin, C NE SW Sec. 32-15-15.
Set 6-in. 1,928 ft.; testing 1,928 ft.

UNION COUNTY

Mrs. R. K. Jones et al's No. 1 J. Davis, 330 ft. N and W, SE cor. NW NW Sec. 28-16-14.
Arranging to test 2,764 ft.
Lion Oil Ref. Co.'s No. 10-A Flenniken, 200 ft. N, 630 ft. E, C Sec. 10-16-15.
Rigged up and S.D.; W.O.
McCreslenn Oil Co.'s No. 2 G. Norman, 330 ft. N and W, SE cor. SE NE Sec. 3-18-13.
W.O.S.R. 3,574 ft.
McCreslenn Oil Co.'s No. 1 Union Saw Mill Co., 330 ft. N and W, SE cor. NE NW Sec. 3-18-13.
P.B. from 3,577 ft.
Reuter Oil Co., Inc.'s No. 1 J. L. Kinard, 330 ft. S and E, NW cor. SE NW Sec. 32-18-14.
Set 7-in. 2,147 ft.
Tubal Pet. Co.'s No. 1 Gaddy, 340 ft. N and E, SW cor. SE NW Sec. 14-17-14.
S.D.; W.O. 3,416 ft.

MISSISSIPPI

AMITE COUNTY

Mineral Resources, Inc.'s No. 1 Anderson, C NE NW Sec. 14-3n-3e.
S.D. 550 ft.

GREENE COUNTY

United Gas Pub. Service Co.'s No. 1 Greene County School Land, W½ W½ Sec. 16-1n-5w.
Derrick.

JONES COUNTY

Snow-Black Pet. Co.'s No. 2 Watson, 520 ft. W, 200 ft. S, C Sec. 24-7n-13w.
D.S. stuck, 3,900 ft.

LAUDERDALE COUNTY

Bob Dalton's No. 1 Bounds, Sec. 34-7n-15e.
Set 10-in. 560 ft.; S.D.; W.O.

MONROE COUNTY

P. J. McAlpine's No. 1 Crook, 1,090 ft. S, 90 ft. W, NE cor. Sec. 15-15s-17w.
Drlg. 750 ft.

SIMPSON COUNTY

Berry Corp.'s No. 2 R. T. Berry, Sec. 32-2n-4e.
Set 7-in. 2,048 ft.

WALTHALL COUNTY

Mutual O. & G. Co.'s No. 1 Boyd, SW cor. SW SE Sec. 24-2n-9e.
Partly rigged up and S.D.

WARREN COUNTY

Orbet Drlg. Co.'s No. 1 R. L. Parker, 300 ft. E, CWL Sec. 14-14-1e.
S.D. 3,169 ft.

WASHINGTON COUNTY

Perkins & Dees' No. 1 Lee, 1,500 ft. E, 500 ft. N, SW cor. Sec. 33-15n-8w.
Set 10-in. 300 ft. and S.D. (corrected).

WINSTON COUNTY

Jack Vale et al's No. 1 Moody, 713 ft. N, 667 ft. E, SW cor, NW SW Sec. 3-13n-14e.
S.D. 20 ft.

La.-Ark. Proven Fields

NORTH LOUISIANA

CADDO—HOSSTON

Louana O. & G. Co.'s No. 3 Hammock, 660 ft. N, 2,830 ft. W, SE cor. Sec. 32-19-16.
S.W. and abnd. 948 ft.
Bayou State O. & G. Co.'s No. 1 Connell, 1,900 ft. N, 1,198 ft. E, SW cor. Sec. 15-21-14.
W.O.S.R. 964 ft.
C. G. Gibbon's No. 1 Burglass, 573 ft. N, 660 ft. W, SE cor. NE NE.
Set 7-in. 2,084 ft.
Shoreline Oil Corp.'s No. 44 Crystal, 220 ft. S and E of C Sec. 13-21-16.
Rigging up.
Shoreline Oil Corp.'s No. 3 Harrell, 250 ft. S, 220 ft. E, NW cor. SE SW Sec. 2-21-16.
Set 6-in. 1,031 ft.

CADDO—RODESSA

Ark.-La. Pipe Line Co.'s No. 1 Parker, 726 ft. S, 450 ft. E, NW cor. NE NW, Sec. 26-23-16.
Comp. 50,000,000 ft. gas 5,655 ft.
United Gas Pub. Serv. Co.'s No. 1 Christian, 724 ft. N, 1,382 ft. W SE cor. Sec. 23-23-16.
Set 7-in. 5,440 ft.; coring 5,543 ft.

SABINE PARISH—ZWOLLE

Alexander & Cane's No. 1 Fogman, SE cor. N½ SW NE Sec. 18-7-11.
Arranging set csg. 2,353 ft.
Ivan A. Allen's No. 1 La. Long Leaf, 330 ft. N and W, SE cor. NW SE Sec. 12-7-11.
S.D. 1,920 ft.
Dyer et al's No. 1 McCollister, 330 ft. S and E, NW cor. SW NE Sec. 24-7-12.
S.D. 1,100 ft.
Foster & Hartman's No. 1 Bowman-Hicks, 330 ft. S and E, NW cor. NE Sec. 10-7-12.
S.D.; W.O. 2,696 ft.
E. D. Holcomb's No. 1 Porter, 330 ft. S, 330 ft. W, NE cor. SE Sec. 7-7-11.
W.O.S.R. 2,580 ft.
H. C. Maulding's No. 1 Davis, 350 ft. N and W, SE cor. NE NE Sec. 2-7-11.
Rigging up.
H. C. Maulding's No. 2 DeLatin, 330 ft. S and E, NW cor. NE SE Sec. 3-7-11.
S.D. 2,250 ft.
Pelican Nat. Gas Co.'s No. 35 La. Long Leaf, 330 ft. S and E, NW cor. NW NE Sec. 9-7-11.
Set 7-in. 2,370 ft.; testing 2,490 ft.
Pelican Nat. Gas Co.'s No. 14 Sabine Lbr. Co., 330 ft. N and W, SE cor. NE SW Sec. 11-7-12.
Tested dry; W.O. 2,642 ft.
Tarver & Bauer's No. 2 Barthold, 400 ft. E, 312 ft. S, NW cor. NW NE Sec. 35-8-12.
Set 10-in. 41 ft.; set 6-in. 2,355 ft.
Texas Co.'s No. 3 R. Mainer, 330 ft. N and W SE cor. Sec. 5-7-11.
Set 10-in. 43 ft.; drlg. 2,343 ft.
Texas Co.'s No. 1 H. E. Wilson, 330 ft. S and W NE cor. SE SE Sec. 31-8-11.
Derrick.
Tex.-La.-Ark. Oil Co.'s No. 1 Pickering Lbr Co., Sec. 3-3-12.
S.D. 2,210 ft.

EAST TEXAS (BORDER COUNTIES)

CASS COUNTY

R. K. Kamon et al's No. 1 Savage, Mary Patterson Sur.
S.D. 4,016 ft.

HARRISON COUNTY

R. C. Payne et al's No. 1 Lowery, E. D. Spain Sur.
P.B. to 3,524 ft.

PANOLA COUNTY

R. H. Davis' No. 1 Wooten Est., Winnie Mann Sur.
S.D. 2,092 ft.
Givens & Holloway's No. 1 Wooten est., Winnie Mann Sur.
Fishing for D.S. 1,780 ft.
R. W. Price's No. 1 Crawford, J. A. Williams Sur.
Rigging up.
Fred Stovall Drlg. Co.'s No. 1 H. B. Ivey, P. Martin H.R.S.
Drlg. 1,985 ft.

SHELBY COUNTY

Bush Oil Int.'s No. 1 Windham, W. M. Blackburn Sur.
S.D. 3,366 ft.
Cliff Stovall's No. 1 Pickering Lbr. Co., C. H. Patterson Sur.
Arranging resume drilling.
Turner & Neil's No. 1 Pickering Lbr. Co., P. W. Harvey Sur.
S.D. 250 ft.

ALABAMA

HOUSTON COUNTY

Rice O. & G. Co.'s No. 1 Oakley est., SE cor. NW SW Sec. 9-3n-29e.
Drlg. 2,340 ft.

LAMAR COUNTY

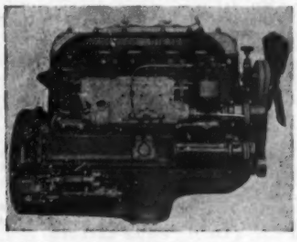
DeSoto O. & G. Corp.'s No. 1 Gardner, Sec. 22-15s-16w.
Fishing for tools 4,180 ft.

NEW AND IMPROVED EQUIPMENT

Hercules Offers Addition to Its Diesel Engine Line

Hercules Motors Corp., Canton, Ohio, announces an addition to its line of six-cylinder Diesel engines in its Model DRXB—4⅝x5¼". This engine with a displacement of 474 cubic inches (7.77 liters) and an N.A.C.C. rating of 45.9 horsepower develops 120 horsepower at 2,000 r.p.m. and a maximum torque of 340 foot pounds, this torque curve being exceptionally flat, varying only 40 pounds from 600 r.p.m. up to 2,200 r.p.m.

This engine interchanges with the Hercules gasoline engines known as the YX



and RX series in installation measurements.

The engine is a full Diesel of the auxiliary combustion chamber type which controls the burning of the fuel and makes this engine very powerful for its displacement as well as smooth running, flexible and economical.

Both the crankshaft and camshaft are carried on seven bearings, the former being 3" in diameter with 2⅝" crankpins and full floating piston pin of 1⅝" diameter.

Main and connecting-rod bearings are removable steel shells lined with high-lead bronze, capable of carrying high pressures and temperatures.

Aluminum alloy pistons are used for maximum heat conductivity and lightness of reciprocating parts. Connecting rods are of heat-treated chrome nickel molybdenum steel and rifle-drilled for wristpin lubrication. Connecting-rod bolts are forged integral with the connecting-rod forgings, which design brings the clamping action closer to the bearing edge than is possible when the rods are drilled and separate bolts used. Besides the rod is stronger than when drilled and machined for the bolt and head. Wristpins are full floating.

Wet-type removable sleeves are used for cylinder liners. These are made of a special iron alloy centrifugally cast.

Water jackets have received special consideration so that the portions subjected to the highest temperatures are swept by water under high velocity, by means of a centrifugal type water pump.

The cooling fan is driven from a pulley on the extended shaft of the water pump, and when an air compressor is required for brakes or other purposes it is mounted on a bracket attached to the gear cover and is driven by the same belts that drive the fan.

Lubrication is forced feed to all main and connecting-rod bearings, wristpins, timing gears and the overhead valve mechanism—splash, or throw-off, from the rod bearings lubricate the cylinder walls.

Ingersoll-Rand's recently issued bulletin No. 2,096 covers the Calyx core drill for boring small or large cores for exploration or other purposes. The Class W drill described in the bulletin will bore a core 2½ inches in diameter, 2,500 feet deep, revealing the exact nature of the rock structure.

Notes About Trade Literature

An eight-page booklet for refiners and marketers of motor fuels, discussing Neville benzol, a blending material, may be obtained by addressing the Neville Co., Pittsburgh, Pa.

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A request sent to the Chicago Belting Co., 113-125 North Green Street, Chicago, will bring a bulletin which offers "authentic information on hydraulic packings that is not in any textbook."

—

The Linde Air Products Co., 30 East Forty-second Street, New York, has brought out a new edition of its eight-page pamphlet, "The Progress of Bronze-Welding."

—

The United States Rubber Co., 1790 Broadway, New York, has issued new catalogs covering its line of packing and hose. These are available on request.

Bulletin 100-B12, illustrating and describing the Harrison inert gas producer, has just been issued by the Roots-Connersville Blower Corp., Connersville, Ind., sole licensee under the Harrison patent.

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A request to the Ingersoll-Rand Co., 11 Broadway, New York, brings a bulletin on its Type XL high pressure portable compressor developed particularly for oil and gas field service.

—

The Lincoln Electric Co., Cleveland, Ohio, has for those who write for it a specification sheet on Lincoln Shield Arc welders for belted or direct-driven types SA300, SA400, and SA600.

—

An interesting 16-page booklet on "Pressure Regulators and Regulation Problems" may be obtained from the Air Reduction Sales Co., Lincoln Building, New York. It contains charts and diagrams which help the reader to grasp the salient facts relating to this subject.

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"Aluminum Paint, Its Uses and Applications," is an interesting booklet of 64 pages, obtainable from the Aluminum Co. of America, Pittsburgh, Pa. How aluminum paint may be used to advantage in the oil industry and other fields is told.

—

The Magnus Chemical Co., 22 South Avenue, Garwood, N. J., has prepared a bulletin describing "Magnusol," a new compound for removing oil, grease, pigments, abrasives, etc., from metal.

—

The new 40-volt Hobart heavy-duty gasoline engine driven arc welder developed by Hobart Brothers, Troy, Ohio, is described in a bulletin distributed by that concern.

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The Acheson Colloids Corp., Port Huron, Mich., is mailing on request its technical bulletin No. G-182, "Concerning the Use of Colloidal-Graphited Lubricants in Ball Bearings."

Renewable Steel Liner Is Introduced by MacClatchie

A renewable steel liner for mud pumps has been placed on the market by the MacClatchie Manufacturing Co. of Compton, Calif.

This liner consists of three parts: (1) A hardened alloy steel liner sleeve made of seamless tubing milled to specifications and ground to a mirror-like finish; (2) a gland which slides on the end of the liner and lasts indefinitely, and (3) a packing rubber, economically replaceable when necessary.

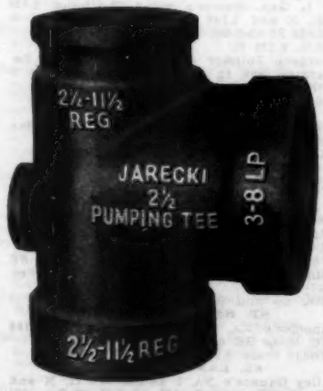
The company has acquired exclusive rights to manufacture these liners under U. S. Patents Nos. 1,592,266 and 1,837,675. The principal advantages cited for the equipment are long life, due to the hardened alloy steel construction; lower first cost; ease of installation and pulling; and low cost of replacement parts, made possible by quantity production.

MacClatchie liners are made in a complete range of sizes for all makes of pumps. Literature may be obtained from the manufacturer.

The A. O. Smith Corp. has reopened its offices in the Thompson Building, Tulsa, with A. E. Butts as district manager.

Jarecki Pumping Tee Made to Withstand Hard Stress

A newly perfected malleable iron fitting, designed to form a connection between the tubing, flow line and stuffing



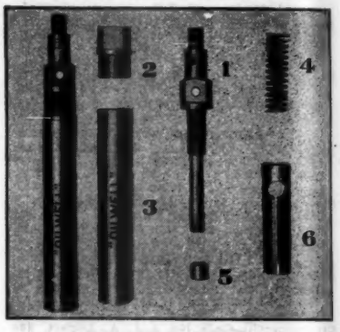
box of a pumping well, has been announced by the Jarecki Manufacturing Co.

Known as the Jarecki pumping tee, the fitting is threaded to screw directly on plain or upset tubing, flow lines and stuffing boxes. Swage nipples, subnipples and bushings are eliminated. Having three times the weight and strength of the standard 150-pound malleable tees generally used, the pumping tee is said to be qualified to withstand the stresses of vibration, the weight of long strings of sucker rods and the weight of improperly supported flow lines. It is available in six sizes for 2-inch, 2½-inch, and 3-inch plain and upset tubing. Details may be obtained from the Tulsa office of the company.

New Releasing Sucker Rod Socket Has Only Six Parts

The Oil Well Supply Co., Dallas, Tex., is now manufacturing and selling the new "Oilwell" Type 33 releasing sucker rod socket which is designed to combine great strength and durability with positive grip, quick release and convenient operation. In order to assure outstanding performance and dependable service for the most severe fishing jobs, all parts are accurately machined and those parts which are subjected to strain are scientifically heat treated.

This new socket consists of only six parts, which are illustrated here: (1) Releasing top; (2) barrel top; (3) barrel; (4) spring; (5) slotted nut; (6) unit slip.



The releasing top, which is tough and strong, is screwed into the barrel top by means of left-hand threads and is provided with wrench flats and a circular hole for the convenience of the operator. The releasing top has a pin extension which acts as a spring guide and is threaded at the bottom for the slotted nut. Serrations are provided on the neck of the releasing top as a safety factor in case it is necessary to fish the socket from the well.

The barrel top, which is provided with wrench flats, is screwed into the barrel by means of right-hand threads. The barrel is heat treated at the lower or internally tapered end for the strength and toughness which are required to prevent splitting or bulging when the socket is subjected to heavy loads. Two drilled holes at the top of the barrel serve as air vents.

A single unit slip with four flexible jaws is used rather than four separate slips, thus assuring uniform engagement. It is made of alloy steel and the jaws are case-hardened, providing toughness for heavy loads and hardness for gripping heat-treated materials.

The slotted nut is inserted inside the unit slip through a circular opening and is screwed tightly onto the pin extension of the releasing top. The slotted nut is approximately five-eighths inch from the slip stop in the top of the unit slip when the socket is made up for fishing. This permits the jaws to extend slightly out of the bottom of the barrel to grip an undersize fish. It is impossible for the entire unit slip to go through the bottom of the barrel.

The socket is lowered into the well until the jaws engage the fish. Then it is raised and the taper of the inside of the barrel and the outside of the unit slip causes the jaws to grip the fish securely. After the rods are pulled, the fish is released by turning the releasing top to the right. The left-hand threads raise the unit slip, permitting the jaws to expand.

In case the fish cannot be pulled, it is released in the well by turning the rods to the right. This action turns the releasing top to the right and expands the jaws in the manner described. The tubing then can be pulled without the necessity of pulling the fishing string and the tubing simultaneously.

The new "Oilwell" Type 33 sucker rod releasing socket is made in 2, 2½ and 3-inch sizes. The 2-inch socket can be furnished with slips for gripping material from five-eighths to 1½-inch diameter. The 2½ and 3-inch sockets can be furnished with slips for materials from three-quarters to 1⅛-inch diameter.

Grant Perforation Cleaner Cleans Clogged Formation

The operation of the Grant perforation cleaner, manufactured by the Grant Oil Tool Co., 2042 East Vernon Avenue, Los Angeles, Calif., is similar to that of the Grant bailer, except that the action is concentrated upon a limited area of perforations and the strong surging set up through these perforations is said to clean clogged formations swiftly and thoroughly. Mud, paraffin, sand, etc., are forced out of the formation through the perforations and into the loading chamber by means of the high-velocity fluid action.

In the bailer the loading chamber is sealed by means of a small concave disc made of hard, brittle composition capable of withstanding increasing pressure, but which can be instantly destroyed by the impact of a plunger provided for this purpose and which is held in position by a sliding shoe on the bailer. The sudden percussion of this plunger, smashing the seal, allows the hydrostatic pressure of the well to force mud, millings, sand, pieces of junk and other debris into the loading chamber, filling the bailer instantly to its full capacity.

The mechanical action of the perforation cleaner is the same except that the sealing disc is broken by a tripping mechanism which is held stationary by the friction guides when the proper depth is reached. Simply by raising the tool slightly in the hole the plunger is released and the disc destroyed, allowing the hydrostatic pressure to force fluid into the loading chamber.

The cleaner is operated until clean oil lifted to the surface presents positive proof that the perforations and adjacent formation are completely cleaned. Few replacement parts are required and according to the manufacturer any experienced production crew can get perfect results without difficulty.

Both the perforation cleaner and the bailer are operated on a wire line, taking out a full load at each run and requiring no renewal or resetting other than replacement of the composition sealing disc, which is performed in a few minutes before lowering again into the well.

The American Welding Society awarded the Samuel Wylie Miller medal to J. C. Lincoln, chairman of the board of the Lincoln Electric Co., Cleveland, Ohio, in recognition of his contributions to the advancement of the science of electric fusion welding.

New Synchro Valve Easy to Maintain and Service

The new Bristol Synchro diaphragm motor valve, outstanding contribution to the art of automatic control. This valve is intended primarily for use on air-operated control systems. As the name implies, the valve responds immediately to air pressure changes, and the stem position for a given pressure is the same whether pressures are rising or falling. There is no hysteresis or friction loss in the top movement. These features are accomplished by the design of the rubber diaphragm and top, precision measurements in the manufacture and assembly of the stem guides, accurate alignment and proper spring construction.

The construction simplifies maintenance and servicing of the valve. Ample space is provided for renewing stem packing without disturbing the adjustments. The top may be renewed or the spring replaced without changing the setting of the spring follower.

Union and valve bodies of either V-port or single seated construction are available with body material and trim to meet the demands of almost any industrial process.

Airco Offers Machine for Accurately Cutting Steel

The Airco-DB Tractograph, latest addition to the Airco-DB line of oxyacetylene cutting machines, manufactured by the Air Reduction Sales Co., Lincoln Building, New York, is said to provide a simple means for accurately cutting steel plates and slabs into shapes having straight, circular or irregular outlines and extending over practically unlimited areas. It is intended for the cutting of plates and slabs up to 2 inches in thickness and has many uses in the oil industry.

The device is a small, compact, motor-propelled unit which can be quickly adjusted to travel at any speed from 2½ inches per minute. It is guided by hand along the desired contour laid out and scribed directly on the plate or slab.

An entirely new principle in cutting machine drive, combined with other features which enable the operator to change the direction of the machine with exceptional ease, makes it possible to turn sharp corners and follow both simple and intricate contours with unusual accuracy.

The Tractograph will cut beveled as well as perpendicular edges. With the radius rod in place it will automatically cut arcs or complete circles. Circles or arcs of smaller radius than the minimum possible with the radius rod, can be cut with manual guidance. Also, it is capable of traveling up an incline of approximately 10 degrees on ordinary hot-rolled steel plate without slipping.

Once the operator has set the travel speed, lit the torch and pressed the starting switch, he can confine his attention to guiding the machine. Results, therefore, are dependent only upon the closeness of his attention to this duty, for it requires no special skill.

It is asserted that work done with the Tractograph will be of higher quality, for the torch, in addition to being held always in correct position relative to the plate, is automatically moved along at a uniform speed throughout the extent of the cut. The machine, weighing 48 pounds, can be carried easily about and used wherever 110 volts, AC or DC current is available.

Shull Perforation Cleaner Possesses Powerful Action

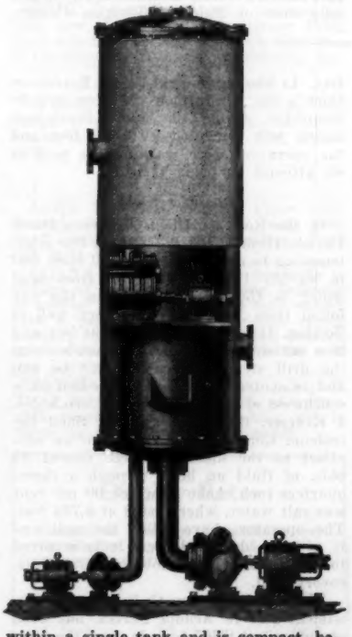
The Shull perforation cleaner, perfected by the Shull Perforating Co., Inc., 2750 Cherry Avenue, Long Beach, Calif., utilizes the same principle of operation as the Shull bailer. It presents a means of effecting a powerful cleansing action throughout the string of perforated casing. This cleaner is equipped with a blind shoe. Holes are drilled therein to provide free entry of the fluid and sand collections from within and behind the casing perforations.

The cleaner is the reverse of the assembly of the Shull bailer, the valve assembly being set in reverse position. The cleaner may be loaded at different levels in the well and the clogged perforations cleaned progressively. It is not necessary to travel to the bottom of the well to load the Shull perforation cleaner. A descriptive bulletin may be obtained from the company.

Steam-Operated Cooler Is New Elliott Co. Offering

The Elliott steam-operated cooler, a new development of the Elliott Co., Pittsburgh, Pa., produces cooled water by means of flash or instantaneous evaporation under vacuum. It provides an economical means of supplying cooled water for precooling wax trailings prior to dewaxing; cooled water for use in unit or central air coolers and humidifiers to supply cooled air to shops and offices; cooled water for drinking purposes and other applications where it is desirable to use water cooled to between 40° and 50° F.

This steam cooler is fully contained

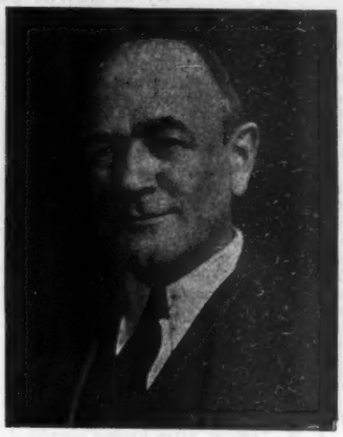


within a single tank and is compact, being 2 feet in diameter and approximately 6 feet in height.

Within the tank is a low-pressure evaporating compartment, a compressor of the steam jet type and a condenser. The exterior of the tank has one pump for removing and circulating the cooled water and another to remove the condensing water from the condensing compartment. An auxiliary motor-driven vacuum pump is mounted on the side of the unit to maintain a moderately reduced pressure in the condensing compartment.

The entire cooling unit can be installed in a space less than 3 feet square and 8 feet high. Water being the refrigerant, no expensive or dangerous refrigerant is required, as cooling is accomplished by direct partial evaporation of the water. The top half of the unit is insulated to avoid absorption loss of heat by the chilled water.

Men Well Known in the Equipment Field



L. R. McCOLLUM

L. R. McCollum has joined the Parkersburg Rig & Reel Co. organization as special representative, with headquarters in Dallas, Tex.

Mr. McCollum, known as Roy in his large circle of friends, has a wide knowledge of oil-field equipment. Until recently he was connected with the Emsco Derrick & Equipment Co. in the Mid-Continent and Gulf Coast areas.

Euclid Truck Designed for Power, Speed and Traction

The new Euclid rear-dump Trac-Truk announced by the Euclid Road Machinery Co., Cleveland, Ohio, is expected to find many uses in the oil field. It is described as a heavy-duty haulage unit which provides power, speed and traction in such a way that they can be used with the greatest efficiency. The engine develops tremendous pull through the low gear reduction to the final drive, with tire tracks increasing the traction sufficiently to use the greater power, even in soft ground. The speeds provided cover an ample range consistent with heavy construction requirements and at the same time the rugged design of the unit is said to insure long life and low upkeep.

Body dimensions and wheel base have been so determined as to effect easy handling and exceptionally short turning. All controls are located to facilitate convenient operation. High quality materials are said to have been utilized in size and strength according to the stress and strain to which each part is subjected in actual use. One of the most important features is the adaptability of Trac-Truks to the use of tire tracks which are designed to insure effective traction and safety on any footing. These tire tracks also serve a dual purpose in protecting the pneumatic tires from sharp rocks and puncturing snags.

PIPE WELDING ASSEMBLY BENCH

Oster-Williams of Cleveland, Ohio, in the pipe threading field for many years, has announced the addition of a pipe-welding assembly bench to its line. This new fixture is capable of handling all sizes of pipe up to 12 inches in diameter and will line up accurately and hold in position for tacking, fittings, flanges and branches at any angle. For handling longer lengths an extension bench can be supplied. The extension can be moved to any angle to the main bench. Adjustable elevator, which can be used at any position on the main bench or on the extension, controls the vertical alignment of the work. Accurate angle alignment is obtained by setting elevator to desired angle. Elevator supports are graduated to make setting easy.

Old Eastern Fields in Kansas Continue Field Activity; Record Gas Well

By SPECIAL CORRESPONDENT

PAOLA, Kans., Oct. 6.—Notwithstanding eastern Kansas is the pioneer of Mid-Continent oil fields, dating back 40 years in production and 70 years in exploratory work, there remains considerable activity in the counties of Franklin, Miami, Anderson, and others east of the deeper and newer fields.

In Franklin County considerable leasing is being done along the Marias De Cygnes River bottom territory, extending northwest to Rantoul. Sears and others just finished a 1,400,000-foot gasser in No. 1 Smith, SW Section 17-17-21, and a 3,000,000-foot gasser in No. 2 on the same farm. The latter is said to be the largest gas well ever completed in the eastern Kansas shallow fields. Same people finished a dry hole in SE Section 28-17-21. James Van Horn is drilling for gas in Section 6-17-21.

R. F. Duffield drilled a dry hole at 650 feet on the west edge of Rantoul.

J. W. Lemons, after having completed several paying gas wells, completed two dry holes in Section 21-17-21.

R. F. Duffield is drilling 1 mile west of Sears and others' gas well above mentioned.

J. W. Lemons & Sons are moving two rigs on locations on the Seymour farm, northwest of Rantoul, to offset a light gas well which they recently completed.

John Gallanaugh and others completed a dry hole at 1,100 feet on the Quillhoist farm in Section 6-16-21, near Wellsville.

Art Sands has leased 800 acres in Sections 10, 11 and 14, in Township 17-20, and is now moving in to drill the first test.

In Miami County

Branson & Hay completed a shale gas well at 400 feet, testing 100,000 feet. They are now moving to the Whiteford farm in NW Section 30-18-23, Miami County.

Sides & Sodomon have one well drilling on the State Hospital site, 1 mile north of Osawatomie.

Breisach and others completed a dry hole east of Beagle, and moved their rig and now have a well drilling in the southwest edge of Paola.

Colbert & Roberts completed a dry hole at 750 feet on the Carson farm east of Osawatomie.

Ed McCulley is drilling at 600 feet on the P. Grant farm, 1 mile south of Beagle.

Anderson County

Dr. W. T. Stroud, of Garnett, completed an 80-bbl. oil well 1 mile east of Kinkaid. This is the second producer on the same acreage and extends the Bourbon Shoestring Pool one-half mile farther north.

OKO Oil & Gas Co. is drilling at 600 feet in SE Section 15-21-20, on the Bush City Shoestring.

Douglas County

F. G. Hill is drilling at 400 feet on the Howard farm, 2 miles south and 1 mile west of Baldwin, Douglas County.

Gulf Coast Fields

(Continued from Page 59)

7,918 feet and was plugged back and sidetracked at 6,600 feet. While drilling to the original depth, the test encountered several showings of oil and gas and if it does not make a producer it will be plugged back again and will test the upper showings. This is the third test drilled by the company on its 7,000-acre block, and the operators have recently started operations on its No. 1 State Land which is three-quarters of a mile south of No. 2 Barbe estate. Since the reported showing of oil in No. 2 Barbe an extensive royalty and leasing campaign has been taking place throughout the area. Location of the prospective oiler is in Section 11-9s-8w on the bank of the Calcasieu River.

Humble Oil & Refining Co. has made an interesting location for a wildcat in Calcasieu Parish, to be carried as No. 1-B Industrial Lumber Co., 5 miles northeast of Starks, and 1½ miles southeast of the Kansas City Southern Railroad in Section 27-8n-12w. The company is reported to have a block of about 10,000 acres in the area.

East Hackberry

On the northeast flank of the East Hackberry Field, Cameron Parish, Texas Co. has completed its No. 12-B State for an initial production of 1,512 bbls. daily from a total depth of 5,832 feet. Besides making a northeast extension to the field it opens a seventh and a shallower productive sand. Five other producers in the field are producing from varied depths ranging from 6,090 to 7,475 feet. Another test on the east flank of the field has encountered some showings of oil and gas while drilling below 6,058 feet. It is Gulf Refining Co.'s No. 15-A M. P. Irwin in Section 12-12s-10w. It had a show of oil from 6,048-58 feet but not enough to warrant setting casing.

Magnolia Petroleum Co.'s No. 9 Wait in the Iowa Field, Jefferson Davis Parish, has been completed for an initial production of 600 bbls. per day through one-quarter inch choke with tubing pressure 850 pounds from a total depth of 6,882 feet. In the same field, Shell Petroleum Corp.'s No. 5 Stafford probably will be completed during the week. Seven-inch casing was cemented at 6,850 feet and the operators were washing the well in an attempt to bring it in.

Roanoke Field

In the Roanoke Field, Jefferson Davis Parish, Humble Oil & Refining Co. is attempting to make a second drill stem test in its No. 1 Martin Kratzer from sand which is 150 feet deeper than the pay found from which the discovery well is flowing. It is bottomed at 8,830 feet and if a satisfactory showing is made from the drill stem test, casing will be run and cemented. Location is one-half mile southwest of Shell Petroleum Corp.'s No. 1 Kratzer, the discovery well. Shell Petroleum Corp.'s No. 1 Jernigan, an east offset to the discovery well, flowed 34 bbls. of fluid an hour through a three-quarters inch choke of which 99 per cent was salt water, when tested at 8,764 feet. The operators have killed the well and it is to be drilled deeper. It is reported to be running 80 feet lower than the discovery well.

Woodley Petroleum Co.'s No. 1 Daigle, wildcat test in Acadia Parish, has been abandoned at 8,504 feet. It is on the company's 14,000-acre block in Section 24-7s-1e, and has been one of the most watched wildcats on the Gulf Coast.

In St. Mary's Parish, Roy Black and others are preparing to start drilling operations on their No. 1 Chetimancha, which has been shut down at 6,501 feet.

Kansas Fields

(Continued from Page 70)

showed for a 20-bbl. well in Kansas City lime at 2,568-78 feet. It will be acidized.

Butler County

Flint Hills Oil & Gas Co.'s No. 7 Martin, NE cor. Section 27-28-4, Butler County, is a 450,000-foot gas completion at 1,452-97 feet.

Great Southern Oil Co.'s No. 34 Hull, NE cor. Section 10-26-8, Greenwood County, made a 10-bbl. completion at 2,425-75 feet, which sand had been shot.

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WANTED WILDCAT. Eastern capital will drill test well. Oklahoma or Texas if geology good and sizeable block. Give full information first letter. Address Box G-373, The Oil and Gas Journal, Tulsa, Okla.

NEW MEXICO Oil and Gas Leases and royalties. Send 50 cents in stamps for new State Oil Map of New Mexico Roy G. Barton, Clovis, New Mexico.

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NEW MEXICO—My weekly scout report furnishes complete and reliable information on New Mexico developments. Send for copy. W. S. Patterson, Santa Fe, N. Mex.

FOR LEASE by Land Company 100,000 acres of prospective oil land in Northern Arizona. Excellent Geological report. References furnished and requested. Not interested in promotions. P. O. Bin C, Flagstaff, Ariz.

INVESTIGATE TURNER VALLEY!—Holder extensive freehold oil rights North end Turner Valley, Alberta, would lease on advantageous terms to party undertaking drilling operations. Producing wells in neighborhood. Particulars on application to Box 402, Calgary.

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CASING AND LINE PIPE—In Texas, Oklahoma, Kansas and surrounding states we are continually securing attractive values in good used tubular products and our many conveniently located pipe yards are always well stocked with the sizes, grades and kinds of Casing, Tubing and Line Pipe required for economical development of the various localities covered. We are buying and selling every day and with stocks changing rapidly we are practically always in position to furnish promptly exactly what is wanted whether the need be common-place or unusual. The following items are only suggestive of what we can supply:

AT HOUSTON—We can always deliver from Houston yards 5,000 to 20,000 feet of good 2-in., 2½-in., 3-in., 4-in., and 6-in. Line Pipe. Right now we have on hand over 12,000 ft. of good quality 4-in., 8-thd. Line Pipe; and over 2 miles of excellent 3-in., 8-thd. Line Pipe as well as liberal quantities of other sizes.

EAST TEXAS—In Kilgore yards: A full string of 6⅝-in. O.D. 10-thd., long Drill Pipe Casing with new threads and new long couplings. This is carefully shopped and good quality throughout. Also have 10-in. and 12½-in. Lapweld Surface Pipe and large quantities of 5⅛-in., and 7-in. O.D. (6⅝) Lapweld Casing for oil strings ready for immediate delivery.

AT PAMPA—Several strings of 7-in. O.D. (6⅝) 20-lb., 10-thd.; and 24-lb., 10-thd. Lapweld Casing, long collar and first grade quality. We also always have a complete stock of all sizes of Lapweld and Seamless Casing and large quantities of all sizes of used Line Pipe ready for delivery from Pampa yards.

IN KANSAS TERRITORY—We carry the largest and most complete stocks of used tubular products in the state and can supply anything that may be wanted. Here are a few items representative of our stocks: At Wichita: 2,500 ft. 12½-in., long collar, excellent grade Lapweld Casing. At McPherson: Ample quantities of 15½-in. (16" O.D.) 55-lb., 8-thd. New National Tube Seamless Casing. At Chase: 3,500 ft. of Extra Good Quality 2-in., 1,800-lb. test, 11½-thd. used Line Pipe. At Russell: 150 ft., 20-in., 90-lb., 8-thd., long Collar Casing.

IN TRANSIT AND ON ORIGINAL LEASE LOCATIONS: We have large quantities of all kinds of good used tubular products all over the territory that has not been moved into our regular stocking points. Much of this material is in transit or in the process of being salvaged and can be diverted to the buyers' location or purchased direct from the original lease location, before handling expenses have accrued, at material savings. It will pay buyers of tubular products of all kinds to telephone us "Station to Station" when in the market for any kind or grade of Casing, Line Pipe or Tubing for we can often supply what is wanted direct from the lease at a considerable saving over current stock prices prevailing for the same quality of material. We are carrying on these salvage operations in many localities throughout the Mid-Continent.

For information on all kinds of used tubular products contact our General Office at Wichita, Kansas; our nearest store or representative; or our central distributing points at Houston, Tulsa, Dallas, Oklahoma City, or Pampa.

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Complete CARBONDALE WAX PLANT—latest type—approved by the manufacturer, 600 bbls. per day capacity or can be divided into 200, 300 or 400 bbls. daily capacity.

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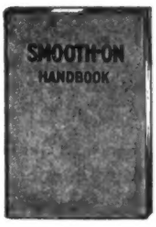

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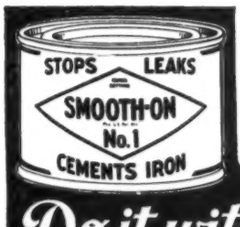

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